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ABSTRACT

This document evaluates the first year of an experimental continuous progress program in a Pennsylvania elementary school. The report covers (1) a summary and a discussion of the evaluation implications, (2) a compendium of other nongraded school studies, (3) a description of the experimental school, (4) a discussion on program structure and staff characteristics as variables, (5) an outline of the ideal educational program as proposed by the State, (6) an evaluation of the graded program, (7) an appraisal of the continuous progress program, (8) the results of student achievement and attitude change tests, (9) the data on parent and teacher attitude change, and (10) a brief examination of the conditions necessary to implement successful educational innovation. Two appendixes provide descriptions of the methodology and the instruments employed and a cost comparison between the graded and the continuous progress schools. (Author)

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NONGRADED ELEMENTARY EDUCATION

INDIVIDUALIZED LEARNING TEACHER LEADERSHIP

STUDENT RESPONSIBILITY

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Preface

In September 1969 a continuous progress program was introduced in an elementary school in Pennsylvania. It was considered desirable to evaluate this experiment in its first year of operation not for the purpose of judging it on a "pass-fail" basis but for the purpose of determining its strengths and weaknesses so that it could find ways to improve constantly from year to year.

Chapter 1 presents a summary of the report as well as a discussion of the implications of the evaluation. Chapter 2 summarizes the results of other studies of nongraded schools. Chapter 3 describes the experimental school, where the continuous progress program was installed, and the control school, which was essentially a modified self-contained classroom (graded) situation. Chapter 4 discusses the program structure and staff characteristics as variables which affect the quality of any educational program, while Chapter 5 sets forth the ideal educational program as represented by the ten goals of quality education which were adopted by the Pennsylvania State Board of Education. Chapters 6 and 7 evaluate the graded and continuous progress programs on the basis of observation in terms of these goals.

Chapter 8 considers the results of the experiment in terms of changes in achievement and attitudes, based on testing. Chapter 9 describes the attitudes and changes in attitudes of teachers and parents with respect to the experiment. These data were obtained from a questionnaire survey. Chapter 10 presents a brief discussion of the necessary conditions for successful innovation in education. Appendix A includes a description of the methodology and the instruments employed. Appendix B compares the costs between the graded and continuous progress schools.

Normally, there would be the usual achnowledgements for assistance on the part of various officials and teachers in the school system. Since the identities of the experimental and control schools are not disclosed, the acknowledgement must be general and not specific.

Norman G. Kalber provided invaluable assistance in handling the necessary computer work.

Jacob J. Kaufman

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CHAPTER 1

OBJECTIVES, RESULTS, AND IMPLICATIONS OF THE EVALUATION

A. Introduction

In writing about alternative models of elementary education, a prominent educator sets forth four biases (or principles) concerning education. First, whether or not it is planned, there is a social system of the school which "provides us with values, ways of thinking, and views of ourselves . . . ." Second, "too much education today is mediated through the teacher," indicating failure to recognize that there are "many kinds of educational agents." Third, "The schools of America . . . are far too homogeneous . . ." and therefore it would be desirable that "diversity will replace the remarkable similarity of our schools . . . ." And fourth, "It is in the schools that the young learn whether and how to debate the future. In our concern with the teaching of skills and 'essential knowledge,' we have neglected the personal, reflective functions of education" (Joyce, 1969).

In effect, these principles constitute a criticism of our current educational system, i.e., a failure to recognize that a school is a total social system, composed of administrators, teachers, students, and parents; is teacher oriented; is homogeneous, despite our frequent assertions that local control tends to reflect local differences. Further, it implies that our present educational system has not taken account of affective as well as cognitive skills as necessary components of an educational process.

The experiment which is evaluated in this report, a continuous progress program,[*] represents an attempt to meet this criticism. In the conduct of any experiment in the educational process there are many obstacles to be overcome. These include:

(1) An expectation on the part of school administrators, teachers, parents, and others of "instant success."

(2) A school system develops a set of bureaucratic procedures that tends to preserve the status quo, reflecting in part a desire on the part of the various components to maintain stability.

(3) Teachers, utilizing methods of instruction which reflect either their own experiences as students or their training, therefore frequently resist change because of an unfamiliarity with newer approaches.

(4) The resistance of some parents to change and the conflicts among individual parents as to the best educational system for their children.

These obstacles were not easily--or ultimately--overcome within the first year in which the experiment was conducted. Therefore, it is essential to recognize that the principles of a continuous progress instructional program represent ideals to be attained over time. It must also be recognized that the installation of any new approach will result in errors in judgement and in application and that the persons responsible for the installation of a continuous progress program must have an opportunity to experiment, adjust, and rearrange. Therefore, any evaluation of a new program should be viewed as a continuous process of new approaches, evaluation, feedback, and readjustments, and not as a one-shot affair on the basis of which final decisions are made.

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[*] The word "nongraded" does not represent all of the features of a continuous progress program.

In this connection, the objective of an evaluation of experimental educational programs should not necessarily be limited to making "yes" or "no" decisions concerning their effectiveness. The evaluation process, if it begins to permeate an educational system, has other objectives. First, evaluation injects into the school system a recognition that "what is" is not necessarily the best, and that alternative approaches should constantly be explored. This is the essence of professionalism on the part of teachers and administrators--never being satisfied with what is, seeking new and improved methods of education, and experimenting with new approaches.

Second, evaluation, accompanied by experimentation or innovation, tends to bring to the school system a spirit of challenge and stimulation among principals and teachers, an element which tends to be missing from many activities of the public sector. Thus, the evaluation process produces both professionalism and challenge, which are desirable characteristics of any educational system.

It is being suggested, if not emphasized, that the evaluation of the continuous progress school should be viewed in this broad context and not within a narrow view of "pass" or "fail."

This foreword is designed, first, to highlight the results of the experiment; second, to indicate the implications of the results;

and third, to point out unanswered questions which deserve further exploration. In reading about the results one should keep in mind not only the obstacles discussed earlier but also the spirit of the experiment and its evaluation. It should also be recognized that there are unavoidable limitations which are inherent in collecting evaluative data (such as achievement test scores) and in making comparisons between different educational programs. These are fully described in the body of the report and in Appendix A.

B. The Results of the Evaluation

Two approaches toward evaluation were utilized in this study. The first can be described as process evaluation based on observations and informal discussions with program leadership, teachers, and children by a competent observer. The second was based on testing children, both "before" and "after," to determine changes in achievement and attitudes. Both a control and an experimental school participated in the study.

On the basis of "observation" the continuous progress educational program reveals itself in a more favorable light. The criteria for measurement by observation are the program structure and staff characteristics and the ten goals of quality education as set forth by the Committee on Quality Education of the Pennsylvania State Board of Education in 1965. However, on the basis of "testing" the control (graded) school tends to show slightly greater gains in certain areas, usually those which reflect students' ability to memorize. When account is taken of other variables the overall general conclusion can be drawn that the results in both programs are, on balance, similar. The limitations of both approaches are apparent and are discussed in the report. Interestingly enough, this difference between "observation" and "testing" is consistent with the results of other studies, which are also summarized in the report.

1. The Results, by Observation

Brief descriptions of the self-contained classroom and the continuous progress program follow.

In a self-contained, graded classroom situation the individual teacher is essentially the independent variable. The quality of instruction depends on each individual, isolated teacher's ability to understand cognitive growth and to tailor the instructional program to the developmental sequences of each child. Since few teachers are able to develop such a sophisticated program without help from peers and experts, most tend to teach to the upper middle of the class, to the detriment of the very bright and the very slow. In such a teacher-centered situation, teachers teach to their own misconceptions of what children should be learning. Instruction is likely to become test oriented rather than process oriented. Also in this type of environment, teachers unconsciously tend to cater to their own needs rather than to the needs of the children. The environment becomes regimented and the child must rely upon one teacher for most of the day for decisions, activities, and support.

The self-contained, graded situation generally fosters certain handicaps to the development of the child's self-understanding, confidence, and integrated personality. Although certain teachers are able to provide an excellent atmosphere for this growth, the general isolation and teacher centeredness of the self-contained situation do not encourage optimal development of the child.

In a graded school the degree to which the school environment contributes to the social development--awareness, concern, and action--of the child is largely dependent on the competence of the teacher in his individual classroom. For the most part, classrooms in a self-contained situation do not provide for the optimal social growth of the child.

A continuous progress school in an ideal situation is constantly growing and changing. Consequently, it is exceedingly difficult to freeze the program under consideration in time, as compared to the ease with which this can be accomplished for the graded school, which was usually static except for the classrooms of a few teachers.

The continuous progress school can be far more successful than the graded school in fostering optimal cognitive development and creativity and the love of learning. It provides an enriched environment which offers a collage of experiences as a basis for the development of communication skills. The teaching of language skills is geared to the growth sequences and motivation of individual children so that each can develop at his optimal rate. Exceptional children thus tend to benefit greatly in terms of cognitive and personal growth.

Creativity and spontaneity are encouraged in the continuous progress program by the structuring of the classroom. The children are encouraged to utilize body movement, to interact with each other, and to make "working noise" whenever it seems appropriate. Test-oriented instruction has no place in the program and testing is subordinate to the learning process.

Children appear to develop more positive attitudes toward school and learning, seem more enthusiastic, more vibrant, more content, although the testing process did not reveal such differences. They are given many opportunities to make choices about their activities in the course of the day, and the curriculum is tailored to their interests and concerns. Children are not pushed into activities but rather are encouraged to develop at their own pace.

The structure and philosophy of the continuous progress school tend to optimize the personal development of most children. They seem to develop strong internalized controls rather than to affect the outward trappings of control so evident at a graded school. Since the experimental school considered in this report was less feminized it provided more stimulation and interest for boys than the control school. Most exceptional children benefited greatly in this program: there was no stigma attached to being slow or immature, or bright, for each child was placed with others working at the same level.

In a self-contained graded situation the structure of the school and the poor utilization of leadership and expertise can create obstacles to the effective implementation of an educational program and to the improvement of the quality of instruction. Without internal teacher education and constant dissemination of valuable information and concepts, most teachers do not grow professionally. They tend to remain static, and the lack of built-in channels for the dissemination of information and professional interchange contributes to the tendency of teachers to stagnate. Another obstacle is the difficulty in providing a regular procedure for the evaluation of the program. Teachers in the self-contained situation are apt to be more threatened at the prospect of evaluation, and thus often resist the use of experts or evaluators.

Teacher quality seems to be the single important determinant of the quality of instruction in the self-contained, graded situation. In a continuous progress program, given the variation in teacher quality, better utilization of the teaching resources is possible. Because the teacher is in total control of the classroom the program can be very teacher centered: one sees his students as "my children," rather than as individuals.

Teacher identification with the school program and with other teachers appears to be low in the self-contained situation. The atmosphere does not foster professional interchange among the teachers, and as a result there is not likely to be a community of supportive peers to help a teacher through a crisis or problem. This naturally contributes to low identification with the program.

The structure of the continuous progress program with its optimal utilization of leadership and expertise, built-in teacher education, constant encouragement of professional interchange, and automatic evaluation procedures facilitates the building of a program and the improvement of the quality of instruction. The program is designed and built within the framework of carefully developed goals, which makes education more harmonious with the needs and growth patterns of children. Through planning sessions, constant professional exchange, and active participation of the program leadership, evaluation of the program and its effectiveness becomes a daily process.

One problem which can develop is a possible conflict between the necessity for a strong leadership to implement the program and teacher participation in the decision-making process. This may lead to the development of informal group leaders who can exert a great deal of influence over the direction of the program, positively or negatively.

Leadership must also cope with the problem of teacher adjustment. Some teachers have difficulty in adjusting to the goals and concepts of a continuous progress program, to the flow of the day and requirements of the schedule and to budgeting time. Thus, they may yearn for the self-contained classroom situation. The leadership then faces the task of stimulating teachers to grow and develop while staying within the limits of what teachers can actually accomplish without being overwhelmed.

It is clear that there are significant differences in the structures and staffs of the two types of programs. The structures and staffing patterns of most self-contained school situations tend to encourage each teacher to be an isolated unit, operating in a classroom with virtually total control over children and curriculum. It is, therefore, more difficult to build a strong educational program or to improve that program through teacher education, dissemination of information, and evaluation.

Thus, the teacher becomes the independent variable in the quality of education which each child receives. The child with an accepting, concerned teacher experiences an educational program geared to his needs, and the child with a poor teacher is subject for an entire year to, at best, a rather uninspiring school program and, at worst, a negative, anti-learning experience. In the self-contained situation it is easy for the teacher to become more concerned with fulfilling his own needs than those of the children, because he has little support or stimulation from outside his classroom. He also tends to lack identification with the school and with his fellow professionals, although he may have very positive attitudes about teaching and education, which are a reflection of his feelings about his own competence and teaching situation, not of the school situation. All in all, there are inherent in the self-contained graded situation certain barriers to the development of a superior educational program in a school. It is possible that with inspired and vigorous leadership, an excellent program could evolve in the self-contained situation. The quality of leadership required to implement such changes, however, is most likely beyond the scope of the vast majority of the public schools.

Some other form of structure and staffing pattern is essential, therefore, if quality education is to be brought to the public schools, a structure and staffing pattern conducive to the development of a vigorous, constantly evolving, child-centered educational program.

Several problems can develop which inhibit the growth and development of a continuous progress program. They involve questions of leadership, group dynamics, and teacher adjustment. Group dynamics becomes a crucial variable in the relationship between teachers and leadership when conflicts arise between the two groups. Teacher adjustment is another problem: some teachers simply cannot adjust to the demands of the program and are "over their heads" professionally.

On the whole, the structure and staffing pattern of the continuous progress school studied in this report seemed superior to those of the graded school in providing opportunities for the development of a superior educational program. There were problems with leadership and with teacher adjustment; possibly a differentiated staffing pattern would have helped in eliminating some of these problems and in improving teacher adjustment to the program.

2. The Results, By Testing

The first step in the analysis by testing involved a comparison of the actual pretest and posttest achievement levels of students in both schools. This was done by using multiple t-tests rather than analysis of variance because there was a need to look at each of the four comparisons separately, rather than all together.

Second, to avoid between-school comparisons in terms of absolute achievement levels, and to avoid presenting to the staff of the continuous progress program an evaluation in terms of grade-placement scores, all achievement test results are presented in terms of pre-to-post gains in achievement. The gain score analyses produced essentially the same results as the pre-post between-school analyses, but in a clearer and more concise manner. The data on the overall results were analyzed further to determine what factors might account for some of the noted differences.

Third, since a review of the literature tends to indicate that a continuous progress program may produce its strongest effects on the "exceptional" children (those very high or very low in ability) and since the process observations indicated that this appeared to be true in the experimental school, the sample of students was broken down into high IQ (upper 20%), low IQ (lower 20%), and average IQ (middle 60%).* Several analyses of these data found no significant differences: the exceptional children in the continuous progress program did not appear to have any higher achievement test gains than the exceptional children in the graded program. It is uncertain whether this result is a function of the type of program or the validity and reliability of the instruments or the manner in which the tests were administered.

Fourth, working on the assumption that the children in the continuous progress program who had had some previous experience with graded schooling may have reacted to the continuous progress program differently than children who had no previous school experience, separate analyses of these groups were made and it was found that there were no differences between students in both schools who had no previous school experience. However, students in the continuous progress program with previous graded experience gained significantly less than the graded children with previous graded experience.

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*Analyses using the upper and lower 10% levels produced the same results as the 20% levels--no differences.

Fifth, a further check into the reasons for this difference involved two analyses. The first compared the gains within each division (primary, intermediate) of the continuous progress program, following the insights gained from the process observations. This analysis found no significant differences between divisions. The second analysis compared the first-year, second-year, etc., students in each school. The rationale for this approach was that, if the amount of previous graded experience was the key variable, patterns of decreasing gains should show up in the students in the continuous progress program with previous graded experience. This hypothesis was not confirmed.

The results indicate that, overall, the students in the graded school made greater gains in a few areas which reflect performance based on rote memorization and that these differences in gains were found only among students who had previous graded experience.

These general conclusions, based on testing, should be considered in light of the limitations of the methodologies and statistical procedures employed, as well as the limitations of the data collection, most of which were uncontrollable.

3. Points of Nonagreement

The main points of disagreement (or "nonagreement") between observation and testing are:

a. The observations tend to show that the continuous progress program was far more successful than the graded program in providing the kinds of learning experiences appropriate to the developmental sequences and motivation of children. The achievement test data suggest little, if any, differences in the achievement of the children when one program is compared with another. Although these two statements might appear to mean that there were differences in conclusions to be drawn from the two approaches, it should be clear that different things were being measured.

b. The observations tended to show that there were problems in getting the intermediate division in the experimental school to function as well as the primary division in the same school, especially in terms of teacher morale. These differences were not, however, reflected in the teacher attitude scale, nor were they revealed in a comparison of the test performances of the primary and intermediate students.

c. On the basis of observations the nongraded students appeared to be happier in school and should therefore have been better adjusted. This was verified in the test results of the first-year students who did not have graded prior experiences, but not among the older students who had had graded experience. It was found that the older nongraded students, as compared with older graded students, developed greater anxiety in school. The anxiety of the older nongraded students might be attributed to the change from a self-contained classroom program to a continuous progress program.

d. Much of the literature on nongrading points out that graded and nongraded schools have different basic goals. This makes it difficult to conduct a comparative evaluation, since in doing so one must compromise the goals of one or the other school (or both).

e. The control school (graded) was also subject to certain limitations:

- i. The principal was dividing his time between two schools.
- ii. Two teachers were replaced during the year; there was one teacher change in the experimental school. In all cases these changes occurred during the last third of the year.
- iii. The teachers and principal at the control school were working on some new classroom approaches for the subsequent year. The extent to which these were introduced during the year of the study is the extent to which the school was less useful as an example of the traditional graded program.

f. Because the experimental school was in its first year of operation, many of the "kinks" had not been worked out. The control school had a graded program which varied considerably, based on the traits and abilities of individual teachers. In effect, two schools were compared, one of which happened to be graded and one which had a continuous progress program. Given the limited resources which were available for evaluation, it is difficult to isolate continuous progress as the significant variable. A better evaluation would involve a comparison of several schools of each type, so that multivariate analyses could be carried out, with continuous progress being only one of many variables influencing the relative success of a school program.

It would, indeed, be unfortunate if the continuous progress program were subject to a "pass-fail" criterion. It must be recognized that this was the first year of the experiment with all of the attendant problems of introducing a new program. As one educator pointed out, if one were "to apply evaluative criteria to the Wright brothers' first flight, it wouldn't come out very well." He noted that it would fail on the basis of economy, distance covered, safety, and comfort as compared with other forms of transportation (Allen, 1968).

The continuous progress program was confronted with such problems as the need for the program leadership to utilize certain "trial and error" procedures; the relatively unsatisfactory procedure employed in "placing" students in certain levels, particularly those children who transferred from other school systems; the unfamiliarity of the teaching staff with a continuous progress program, at both the theoretical and experiential levels; and the unfamiliarity of the teaching staff in working with the program leadership and with the students as part of a total social system.

It is assumed that the experiences of the first year of the continuous progress program will become significant inputs to the second year of the program. The chapters in this report which discuss the characteristics and experiences of the continuous progress program, along with the illustrations, hopefully can provide the basis for improvement in the experimental school and for information for other schools which seek to introduce this type of program in their systems.

Furthermore, no educational program can attain its ideal, not only because of its limited experience, but also because one has to take an "on balance" approach toward any educational experiment. To illustrate: in the discussion of the experimental program it is noted that participation of the teachers in the decision-making process is an essential element of a continuous progress program. However, what if--because of the limited knowledge and experiences of the teachers--certain decisions were made by them which were not in the best interests of the children as viewed by the program leadership, which presumably has greater knowledge and experience? Thus, the decision maker (in this case the principal) must balance out these conflicting goals. Any decision is likely to incur the criticism of teachers, program leadership, or children.

C. Implications of the Evaluation

A cursory reading of the report might result in certain inferences being drawn about the structure of the schools, the quality of the program leadership, the quality of the teaching staff, and the attitudes of the teachers, both in the experimental school and in the control school. To avoid any misunderstandings it is essential that certain points be kept in mind while reading the report.

First, in the discussion of the structures of the two schools any criticism offered of the self-contained classroom is not meant to imply criticism of the control school. It is clear that the limitations of the program of the control school are limitations which apply to schools in other districts within and outside Pennsylvania.

And the control school can be considered reasonably typical of such schools. Similarly, what would appear to be approval of the continous progress program largely reflects an attempt to detail some of the characteristics of such a program on the assumption that, if such a program is to be expanded, it would be desirable to elaborate on its best features and to be aware of the various problems which might arise. This report makes clear that there are many obstacles to overcome and problems to solve in introducing a continuous progress program into any school system.

The program in the experimental school can be described as one which applied the traditional curriculum with continuous progress. It was basically child-centered. This is to be contrasted with the traditional curriculum and the self-contained classroom of the control school, which were primarily teacher-oriented.

Second, in the discussion of the program leadership, no attempt is made to "evaluate" this factor in either school. Rather an effort has been made to describe the basic elements of program leadership which are necessary, but not sufficient, conditions for the success of a continuous progress program--indeed, for the success of any innovation. These include a full understanding of the ends and means of the program, at theoretical and experimental levels; a recognition and understanding of the need to regard the school as a total social system, involving administration, leadership, teachers, students, and parents; and a recognition and understanding of the needs, interests, and aspirations of teachers as well as students, and the interaction that takes place between these two groups, particularly when these needs, interests, and aspirations may not be fully compatible between the two groups.

Although the report presents some criticisms of the program leadership at both schools, based primarily on interviews with teachers, these criticisms were not necessarily offered by all of the teachers (in fact there were contradicting statements); nor are they necessarily correct. They represent the reactions of teachers as they saw the programs. On the one hand it is clear that the program leadership in the graded school reflected a training and experience in this type of educational program and, given the goals of the school district--at least in the past--this leadership was performing in terms of these goals. On the other hand, it is obvious that the program leadership in the continuous progress program had--for a long time, and with various degrees of experience in it--been advocating this type of program. It was faced with the usual obstacles to change (described earlier) and with some lack of experience, resulting in mistakes which had to be corrected.

What in essence is being stressed is that the evaluation is not of individuals but of processes; it is designed to describe them and to suggest areas for improvement.

Third, with respect to teacher quality, the illustrations of shortcomings are not designed to criticize teachers per se. Some of the incidents cited occur daily in all schools and in all school systems. Here, too, it should be recognized that teachers are products of their family environments, their personal school experiences, their training experiences in schools of education, the structure of the school system, and the attitudes of the community. Changes in any one or more of these variables could easily affect the performances of teachers in the classrooms.

It is, however, quite clear that there is considerable variation in teacher quality, not only in the two schools under observation, but also in the entire school system. The question is: to what extent can this variation be better utilized within a school system in order to improve the quality (output) of education? Stephen Michelson (1970) has said:

> Some teachers' talents are clearly in bringing diverse groups together, and other teachers are incapable of that. Some teach better with strict discipline, others with more freedom. Some have a conceptual approach to mathematics, some a mechanical approach. Some teachers will interpret Hamlet as weak, some will stress he was tormented. Some are verbally oriented, communicate by words. Others prefer to play physical games, construct things. Some want to direct the class according to plan, some want to develop the sense of planning and conclusion seeking in children. Too much of the search has been to differentiate between these characteristics in a search for the "right" ones. It seems strikingly obvious . . . that the right teacher or method for some children may be wrong for others. Even for the same children, different approaches may work at different times. Teachers should be more prepared to specify their styles to the situations at hand, and administrators should be more prepared to select teachers for the students they will have.

Given that this is the situation which exists in virtually every school and every school district in the country, it becomes evident that the self-contained classroom cannot adequately deal with this variation in teacher qualities and children characteristics. Obviously, an excellent teacher, who combines all the talents and characteristics essential to quality teaching, can do an excellent job in a self-contained classroom. But is this the best use of this resource? First, in a self-contained classroom this excellent teacher is not benefiting from other conditions which prevail in a continuous progress program, such as professional interchanges with other teachers and with the program leadership. Second, his resources could be better utilized if they were made available to other teachers who did not possess all the necessary characteristics of an excellent teacher. The fuller utilization of this resource yields more positive results for a larger number of children.

The combination of the various talents of the different teachers in a total school situation not only produces results in terms of needs, aspirations, and interests of the children but also contributes to a spirit of cooperation, excitement, professionalism, and pride among the teachers themselves, all of which lead to an improvement in the quality of education.

Finally, with respect to teacher attitudes, this study found that the teachers looked with favor on their own programs and that these attitudes did not undergo any overall change during the course of the year. An analysis of individual attitude items revealed that the teachers in the continuous progress program rated it as being more challenging to teachers and as being closer to their conceptions of an ideal educational program, compared with the teachers in the graded school. Furthermore, the former showed a tendency to be oriented more toward process than content.

What this appears to imply is either a commitment of teachers to programs in which they are involved or an ability to adjust to new programs. Neither of these qualities is to be ignored. It might well indicate the potential of teachers to adjust to change, provided all of the conditions essential to change exist.

It should be reemphasized that the failures or inadequacies of many teachers, either in the graded school or the continuous progress program, reflect primarily the inadequacies of the training they received in becoming teachers. The alternatives facing a school system are to seek changes in the methods of teaching teachers or to provide intensive and continuous teacher education and professional interchange.

D. The Training of Teachers

This study is not designed to present a full evaluation of the training of teachers. It might be desirable, however, to indicate certain shortcomings of this educational process primarily to suggest the areas in which teachers are deficient and, in turn, to suggest the kinds of in-service training which would be essential for the development and improvement of a continuous progress program.

In commenting on "the education of the teacher and his role in society," Harold Taylor (1968) reminds us that "during his childhood education the school or college teacher (who teaches the teacher) has been immersed in everybody's American culture, usually in the white middle class; that in about 70 percent of the cases the schoolteacher is a woman and, therefore, more likely, in this culture, to adapt to current social and political norms than to challenge them; and that public school teachers in America are regarded not as intellectual and social leaders, but as the carriers of the conventional wisdom under the direction of those elected to school boards and appointed to superintendencies who represent that wisdom. Otherwise they would be unlikely to be elected or appointed."

Taylor refers to three significant events in recent years which have had, and continue to have, a profound impact on the character of the American educational and social systems. One is the current war situation, which has ". . . raised basic questions about the purposes of education itself and about priorities in the uses of our human resources on behalf of conflicting national interests and policies." The second is the "explosive and violent quality of life in the American inner cities. . . ." Third is the "marked shift in the thinking of the younger generation about its place in American society and the educational system. . . ." The response of the professional educator and his organizations to these and other forces has been primarily in terms of economic improvement of the status of the teaching profession rather than the development of new educational and social policies. Teacher education programs have been "designed to make certain that teachers can function within the existing system [where] . . . effectiveness is measured almost entirely within the closed system by how rapidly and well the students learn the subjects they are taught, how well they meet the academic standards against which they are tested." Taylor refers to William James, who observed that "the art of teaching grew up in the schoolroom, out of inventiveness and sympathetic and concrete observation. . . . In teaching, you must simply work your pupil into such a state of interest in what you are going to teach him that every other object of attention is banished from his mind; then reveal it to him so impressively that he will remember the occasion to his dying day; and finally fill him with devouring curiosity to know what the next steps in connection with the subject are. . . ."

In order to adjust to these broad goals certain innovative ideas about instruction must be introduced. They include:

1. The reordering of subject matter fields into more learnable structures.
2. The new emphasis on conceptual materials.
3. The emphasis on media of all kinds to make subject matter more learnable structures.
4. The analysis of the verbal interaction process and recognition of the educational strengths and weaknesses of indirect and direct influences on student behavior.
5. Attempts at self-directed learning by students.
6. The new uses of operant conditioning processes in shaping the classroom behavior of students.
7. The use of stimulation to bring reality into learning situations.
8. Dial-access material systems for instant accessibility of learning materials.
9. The study of nonverbal communication in the classroom and its effects on classroom climate and student effort.
10. The shift from informational to behavioral objectives.
11. The ungrading of subject matter and its restructuring into continuing strands of progressive learnings.
12. Team teaching and its emphasis on the use of each teacher's special competence.
13. Flexible scheduling to match time modules to the nature of students' activities.
14. Diagnosis and prescription practices for starting a student at his appropriate point.
15. Continuous progress plans which abandon lock-step student movement and adjust progress to individual capacities and rhythms (Woodruff, 1968).

Although this list is not exhaustive, according to Woodruff all of the items have "one critical common element . . . they involve a full shift in the role and form of activity for both the teacher and the learner. The learner shifts from a passive, inactive role to an active, aggressive, self-guiding investigator role. Furthermore, the learner has to move from academia and its verbalistic trappings to a marketplace kind of setting--a theater composed of the realities that make up his living environment. The teacher shifts from the traditional verbalistic dispensing role to a backstage role consisting of planning, stage setting, diagnosing, prescribing, and trouble thwarting." This requires the replacing of the word "teach" with the words "learning guidance."

After reading the above, and the chapters describing the continuous progress program, two questions arise. First, to what extent are teachers currently being trained with these principles? Second, to what extent is the continuous progress program, both as an ideal and as it was practiced in the experimental school, consistent with these principles?

On the dual assumption that teachers currently are not being trained along these lines and that the continuous progress program, in its ideal and as applied in the experimental school, is consistent with these principles, how can a school district implement a teacher in-service training program for the further development of a continuous progress program?

First, such a program should not be only a day or two set aside for training, or even weeks of training. Rather it should be considered virtually a day-to-day and week-to-week program in which there is a constant and continuous interchange among the program leadership and the teachers. What is being suggested is the establishment of a climate of in-service training and not a few inputs from time to time.

Second, the methods employed in in-service training should be similar to those suggested above for classroom teaching. Too often the methods employed in in-service training are inconsistent with those being suggested for the classroom.

Third, the administrative and program leadership (as well as school board members) should be involved in a similar in-service training. For without an understanding of and commitment to an innovative program by these groups, no program of teacher training can be successful.

E. Accountability

In this country a strong interest is developing in the accountability of public institutions to the taxpayers; the public is showing increasing concern that they are not "getting their money's worth." Regardless of the accuracy of this conclusion the dissatisfaction must be reckoned with. Each public body, including a school system, must therefore develop a system of rational decision-making.

In this evaluation an attempt was made to discuss the outcomes of the educational process, as well as its costs. (See Appendix B for a discussion of costs.) In general, it can be asserted that the continuous progress program was conducted with little, if any, "extra" cost.

In order for the school district to maximize its educational outcomes with a given sum of money it must develop a system which contains the following ingredients:

1. A determination of the specific educational outcomes, including statements on how they are to be measured.

2. A recognition of the constraints under which the system is functioning. Some of the constraints might be "controllable" while others are "noncontrollable." The latter can be ignored and the system should concern itself with how to handle the former.

3. A complete "menu" of alternative means to achieve the specified outcomes should be enumerated. This permits consideration of attaining these outcomes at less cost, or of achieving better outcomes with the same cost.

4. An evaluation to determine the extent to which a given process can achieve the outcomes is essential, accompanied by continuous feedback.

The development of such a system is not simple, and if there is not a full understanding of its complexities and limitations it can fail.

This report reflects an attempt to indicate how an innovation is installed, the problems it encounters, and how it is evaluated.

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CHAPTER 2

OTHER EVALUATIVE STUDIES OF NONGRADED PROGRAMS

In the history of education many schools and programs have been nongraded;* graded operations have been the norm only during the twentieth century. The one-room schoolhouse, the university, and all tutorial forms of education are essentially nongraded. Goodlad and Anderson (1963) point out that the first graded school operation in this country, the Quincy Grammer School, was started in 1898 as a copy of the "efficient" Prussian schools of that era. With the onset of mass education, graded school organization became the standard format because it allowed for easier administration of large student bodies and easier standardization of curriculum. It is the graded school, therefore, which has been the "experimental" form. And if the more vocal proponents of nongrading are correct, this experiment has not been a success.

One cannot be at all sure, however, that the advocates of nongradedness are correct. Although they have clearly documented many of the inadequacies of the graded classroom, it is quite another thing to demonstrate that nongraded organization eliminates these deficiencies. The claims which have been made for nongrading are impressive, perhaps even extravagant. Evaluative results, however, have failed to demonstrate either the truth or the falsity of these claims.

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*In this chapter "nongraded" refers to a variety of experiments and studies concerned with schools which have experimented with a program, of which "nongradedness" may have been only one characteristic.

These evaluations are lacking for two reasons. In the first place, there have been far too few of them. Secondly, most of those which have been done are inadequate in scope, experimental design, and statistical procedures. Perhaps for these reasons the professional literature concerning nongraded evaluation is not only inconclusive but confusing. As will be discussed later, evaluators who observe the process of education and the classroom atmosphere of nongraded programs are in agreement that the nongraded approach "appears" to be much better with regard to most of their observational criteria. Evaluators who gather achievement data, on the other hand, lack such consensus. An empirical evaluation can either find that nongraded students do better, or that graded students do better, or that there is no difference. Unfortunately, all three of these alternatives have been found in about equal proportions. It therefore can be stated that nongraded schools _appear_ to be producing happier, more independent, and better informed students in an atmosphere which is more conducive to learning and maturation, but it is extremely difficult to demonstrate empirically that this is in fact the case.

A. Deficiencies of the Graded School

The deficiencies of graded schooling have been well documented by John Goodlad and his associates, among others. These deficiencies may be generally stated as follows: first, the practice of equating chronological ages with stages of learning readiness does not work. Second, yearly sequences of curriculum material for all students do not allow individual students to receive instruction in scholastic skills at the times when they are most ready and able to learn these skills. Finally, the use of graded structures introduces the concept of failure, which has no rightful place in the process of education.

The first of these deficiencies centers upon the practice of placing children in grades according to age. This implies, of course, that most children of any given age must be similar in terms of ability and prior achievement level--indeed, the curriculum demanded by a graded organization requires this similarity. However, IQ and achievement test data gathered by Goodlad and Anderson (1963) and Goodlad (1963) demonstrate the following: children entering the first grade may differ in mental age by approximately four full years, and shortly thereafter their achievement range begins to approximate this spread of abilities. As these children progress through the grades, the ability and achievement ranges become wider and wider. There is a four-year spread in overall achievement in the fourth grade, a five-year spread in the fifth grade, a six-year spread in the sixth grade. The range in specific achievement skills, rather than overall achievement, is even greater and spreads even more rapidly. Only 15 percent of fourth graders are doing "fourth grade work" at midyear; the others are either achieving at less than 4.0 or more than 4.9. Thus, there is really no such thing as a fourth grade class; the label is meaningless. The graded structure simply does not combine students into groups which are ready to learn the same things at the same time. "Tracking" (ability grouping) is not a solution, for the greatest variations are found in the upper and lower portions of the distribution.

The second deficiency concerns the year-by-year progression through the curriculum. Piaget's work on development and maturation (Flavell, 1963) demonstrates that intellectual growth seems to follow a course of sequential stages. The student can only interact with a learning environment at his present stage of development. If new ideas or concepts are presented to him when he is not at the proper sequential stage, he will have great difficulty understanding them. Although these stages do follow in an orderly sequence, movement from one stage to the next is not highly correlated with age.

Another complication is added when one considers Goodlad's (1963) finding that individual children's achievement patterns markedly differ from one subject area to another; i.e., any one child may be at a higher stage in one area than he is in others. This means that within any given grade most of the students will differ in readiness to learn different things and that very few will be ready to learn what the teacher is presenting to the whole class. Gradedness has been termed a "lock step" approach to education, in which all students must move together in order for any of them to make rapid progress. But students simply are not made that way; they cannot all move together.

The third deficiency of graded education is found in the promotion-failure concept. The graded approach assumes that all children must move through their learning environment at a constant pace, as reflected in the yearly promotion from one grade to the next. Children, however, have a tendency to grow in spurts. At any given point in time some children will be undergoing rapid changes in mental maturity, physical growth, and interest patterns, while others will not be changing much at all. What can a graded school do with a "third grade child" who, in two months' time, is suddenly ready to learn the things which are taught in the fifth grade?

Yearly promotion is accompanied by yearly failure. Goodlad (1963) has estimated that approximately one-fourth of the school children experience three-fourths of the failure. This minority of students is obviously not profiting from their school experiences, and the graded system has only one alternative for children who are not keeping up--to retain them in the same grade for another year. This experience is known as failure, and there is substantial evidence to prove that in the long run its results are entirely negative. When promoted and nonpromoted students are equated in terms of learning ability, the nonpromoted children do not catch up to their promoted counterparts in school achievement, and they are found to be less well adjusted personally and socially. In addition, the nonpromoted children begin to actively dislike school and seek to discontinue their schooling as soon as possible (Goodland, 1963).

The graded plan of school organization appears to be efficient in terms of administration and curriculum planning for large numbers of students. This efficiency, however, may be more apparent than real. Given the documented deficiencies of the graded type of operation, it may not really be doing the job for which it was designed.

B. Claimed Advantages of the Nongraded School

Proponents of nongrading have claimed that their approach more than corrects the above-mentioned deficiencies. These claimed advantages of nongrading over grading have been summarized by Tewksbury (1967):

> (1) Each child is helped to work at his own level of readiness. In a nongraded program, a child does not move on to more difficult topics until he has had reasonable success with the preliminary work. Thus, there are fewer gaps in his learning and there is less reason to become confused.
>
> (2) Children are not designated as failures simply because they are not ready to work at a certain level. They are not expected to perform tasks for which they are not ready.
>
> (3) Because of the greater opportunity for children to have successful experiences with their work, they may develop a more favorable attitude toward learning, and toward schools and teachers.
>
> (4) Children who are slow starters in their first year, but who later make faster progress, are not penalized by being made to repeat the entire grade.
>
> (5) When a child has an extended absence, he would not have to miss important work in skill subjects. He could pick up his studies at the point where he left off before his absence.
>
> (6) There are fewer gaps in instruction for especially bright children. Even though they progress more rapidly they do not skip the work of a given grade. Because these children are helped to progress to work which is more commensurate with their ability, they may find school a more challenging experience.
>
> (7) Children who progress more slowly are not failed and then forced to repeat a year's work in the basic skills. Instead, their work follows an orderly sequence which best fits their personal pace for learning, without undue repetition.

(8) Provision is made for the wide range of differences which exist among children, and also for differences in an individual child's performance from one subject to the next. In addition, provision is made for the fact that a child's rate of learning varies from one period to the next; at some times he may make rapid progress and at other times he may progress more slowly.

(9) Children may develop more self-reliance. Students often do not spend an entire year with the same teacher and therefore do not become overly reliant on him. Students also are expected to do much more work on their own or in small groups, instead of in large groups.

(10) Since the children are not competing against a uniform standard (grade-level expectancies), it is possible that less emphasis would be placed on comparing how well children measure up to such a standard. Instead, more emphasis can be placed on the progress and effort shown by each child regardless of his level.

(11) Since none of the work in the skill subjects is reserved for a particular year or time of year, teachers should feel less compelled to push children through grade-level work regardless of their lack of readiness. Teachers would also have no reason to fear that the most capable students, by doing advanced work, would encroach upon material reserved for the next teacher.

In addition to these general advantages, Dipasquale (1964) has put forth the notion that nongrading can save money in the long run, since there will be so many fewer students who are repeating work which they have already tried to cover once. (He estimates the number of repeaters at over one million for the 1963-64 school year.) An NEA research memo (1965) reports a survey which found that the switch to nongrading may have the advantage of forcing school systems to reappraise and update curricula which have been neglected for many years.

The nongraded movement has been gaining many adherents. The extent of its growth is shown in a series of surveys[*] over the period from 1958 to 1965. These estimates of the proportion of nongraded programs range from 5 percent to 30 percent, depending upon locale and size of school system. However, Goodlad and Anderson (1963) feel that surveys of this type may produce overestimates because they include small nongraded sequences within larger graded structures. McLoughlin (1967) reviewed the data from these surveys and concluded that the best estimate of school systems which had nongraded programs at that time was 10 percent, but that the number of programs was increasing rapidly.

Most of these schools have switched to the nongraded approach because of its claimed advantages and because of increasing dissatisfaction with graded programs. The need exists for further approaches, experimentation, and evaluation.

C. Observational Findings

It is not difficult to find glowing reports of how well nongraded schools operate; they abound in the education journals. However, these are usually first-person accounts written by principals, teachers, or consultants who have had some experience with specific nongraded programs, and therefore the reporting tends to be selective. It is more difficult to find studies which incorporate controlled comparisons of preferences for graded and nongraded operations. In such a study, Anderson and Goodlad (1962) reported on a series of surveys which found that the vast majority of educators who have worked with nongrading are enthusiastic about it. Most of these educators reported greater achievement among their pupils, a reduction of discipline problems, greater challenges for gifted students, more enthusiasm on the part of slower students, and more positive classroom atmospheres. In a longitudinal study of one school system which progressed from graded to nongraded organization in sequential steps over a period of years, Bahner's (1960) observational procedures found that teachers and staff members became "more professional" in their orientations and much more involved in working to ensure that their program met its objectives.

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[*] DiLorenzo and Salter (1965), Dean (1963), Gore and Koury (1965), NEA (1961, 1965).

In attempting to draw together the findings of the few controlled studies which involved perceptions of how well nongraded schools were meeting their goals, McLoughlin (1967) came to different conclusions for teachers' perceptions, parents' perceptions, and students' perceptions. The studies which he reviewed tended to show that teachers from nongraded schools favor this type of organization and are supportive of it. Comparisons of teachers in both types of schools, however, did not demonstrate significant differences in teachers' perceptions of the adequacy of any one school. Where small differences occurred, they did tend to favor the nongraded schools. Parents on the other hand, who have had some experience with nongraded schools, express strong approval of nongrading and tend to be happier with the way their children are progressing in these schools. Finally, students do not perceive themselves as learning any more in nongraded programs than they do in graded programs, but nongraded students feel better about their social relationships in school and their personal development than do students in graded schools.

D. Empirical Findings

Although these observations and individual judgements about nongraded schools are quite positive, studies of the achievement and adjustment of students do not (as a whole) favor either nongraded or graded schools. To cite an example of a study which obtained positive results, Hillson (1964) gathered data on two groups of children through the first three years of schooling. One group was assigned to nongraded classes, the other to graded classes. At the end of the three years, the performance of the nongraded group was significantly higher than that of the graded group on standardized achievement tests.

On the other hand, Carbone (1961) tested matched pairs of children who were in the fourth, fifth, and sixth years of school. Within each pair, one child attended a nongraded school and one attended a graded school. The graded students received higher test scores in six areas of achievement and rated higher in social participation, and there was no difference between the groups on tests of emotional stability and feelings of inadequacy.

Finally, Halliwell (1963) studied two large groups of pupils, one from each type of school, and found very few differences between the groups on any of the test scores used.

These three studies are illustrative of the range of evaluative results obtained from comparisons of graded and nongraded programs. A critical analysis of all of these studies was undertaken by McLoughlin (1967). This analysis discovered:

(1) Of fifteen systematic studies of reading achievement, seven found no significant differences in the general reading performance of children from graded and nongraded classes, six found slight advantages in favor of the nongraded classes, and two found advantages in favor of graded classes.

(2) Five studies of arithmetic achievement found that graded children do slightly better, three studies found that nongraded children do better, and two studies found no difference.

(3) Among eight studies of student adjustment, no differences in the adjustment of graded and nongraded students were found in six studies, while the other two showed conflicting results.

(4) When differences in age, years in school, and students' abilities are taken into account, this same pattern on results is found.

From this analysis McLoughlin concluded that in the majority of cases the differences in attainment of children from graded and nongraded classes were negligible. On the basis of objective test results and tests of adjustment, nongrading does not appear to make any difference in the performance of children of any level of ability, who are at any level of school experience, in any subject area.

E. What Does It All Mean?

Given that the graded approach to education contains inherent disadvantages which are well documented, and given that the nongraded approach appears to surmount these disadvantages and adds a few advantages of its own, it should be consistently found that the nongraded approach is superior in many ways. Observational, descriptive reports of nongraded programs tend to confirm that this is indeed the case. Objective test data, however, are not supportive; test results indicate that the type of school which a student attends does not really make any difference.

This situation can be interpreted in three ways. The most typical interpretation would be that test data are the most important indicators of a school's adequacy and that uncontrolled observations are unreliable. Therefore, this interpretation would hold that since the tests show no differences, the choice of which approach to use should be a matter of the personal preferences of each school district. An alternate interpretation would be that standardized test comparisons of graded and nongraded systems are inherently unfair, since the tests were originally designed to provide information for graded systems and nongraded programs have goals which are basically different from those of graded programs. It could also be argued that all of those observers must have some reasons for preferring the nongraded approach, reasons which reflect things which the tests are not designed to measure, such as school atmosphere and children's enjoyment of learning.

A third interpretation would indicate that there is some truth in both of these positions, and that the actual status of nongradedness falls somewhere between these extremes. It is true that the tests are imperfect and are limited in scope, but it cannot be denied that they should be taken into consideration. It is also true that those who report their observations of nongraded operations often have a stake in nongradedness which may bias their perceptions.

No matter what interpretation is preferred by the reader, three considerations should be kept in mind. The first is that in none of the above discussion is there any firm evidence that graded programs are superior to nongraded programs; when there is any edge given, it is in favor of nongradedness. The second is that in none of these studies is there any control over the manner in which the graded or nongraded school is operated. Superiroity of operation undoubtedly will take priority over the type of operation; a well run graded school is likely to be superior to a poorly run nongraded school, and vice versa. Gradedness or nongradedness is only one of many factors which must be taken into account when making decisions about the adequacy of any given school or school system. Finally, certain critics have argued that since no large-scale studies have been carried out there has been no real control exerted over the definition of nongradedness used in all of these small studies. Differences among the many nongraded schools which have been studied may have been greater than the differences between graded and nongraded schools within any one study. At this point in time there are no criteria which allow us to separate form from substance, or to say just what a nongraded school should encompass. It is very difficult, therefore, to make meaningful comparisons between "true" nongraded schools and "true" graded schools, since we are able to define neither.

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CHAPTER 3

PROGRAMS, STAFFING PATTERNS, AND PHYSICAL ARRANGEMENTS OF THE GRADED AND CONTINUOUS PROGRESS SCHOOLS

The material in this chapter is based on observations made at the graded and continuous progress schools and describes the programs, staff, and physical arrangements of the two schools. The comments relate to the subjective impressions of the observer, founded in concrete events and the general situation at each school, and are presented with the full understanding of the limitations of a participant observer technique.*

A. The Control School, A Modified Self-Contained Classroom Situation

The control school represents a typical self-contained, graded classroom situation, although the school population was above average in socioeconomic status and the resources of the school district were significantly above the average for the state. Thus, this situation had somewhat of an edge over the average public school, although its self-contained graded program, with some ability grouping, was fairly typical of schools across the nation.

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*The descriptions and the reported comments of the teachers are factual and are not designed to imply criticism or motives.

1. Physical Arrangement

Although the control school housed kindergarten through sixth grade, only children in grades one through four participated in the experiment because their ages were comparable to those of the children in the experimental program.

Grades one, two, and three of the control school were housed in a cluster. The rooms in the cluster were partitioned by sliding panels which allowed each room to be either completely open to the other classrooms or closed off. The central area provided a common gathering place for classes in the cluster which was best utilized with the sliding panels open. The two fourth grades were housed in regular (and adjacent) classrooms which simply opened into a corridor in another part of the building. The only way to travel between them was through the corridor.

The school included among its facilities a well-stocked library, an all purpose room which contained a stage and served as cafeteria, recreation room, and theatre auditorium, a separate music and art room, and a large playground.

The control school had television facilities available to all classes and a wealth of books and instructional materials, although there appeared to be a shortage of creative and stimulating instructional tools. Books were by far the most common materials, with standard "educational toys" prevalent in the first grades. Few classes had animals or objects of great interest to children. There was little evidence of enriching equipment in general. Apparently, little use was made of books and materials which were available throughout the school district.

2. Grouping of Children

The control school population included two classrooms of children in each of the grades one through four, making a total of eight classrooms.

Essentially the control school was a modified self-contained classroom situation with each teacher taking the responsibility for one class of children during most or all of the day. Within any given grade level the students were divided into two groups of children relatively identical in terms of ability and performance, so that each class had approximately one-third of the more able students, one-third of the average students, and one-third of the less able students. Children spent all but about an hour each day with their homeroom teachers and went to special subjects, recess, and lunch with their homeroom groups.

Although there was some ability grouping of children in the same grade for mathematics and reading in several classes, there appeared to be a lack of understanding of grouping. For example, in one grade a teacher had both the highest and the lowest reading groups while the other teacher had the middle group. This kind of arrangement negates one of the values of grouping--placing children in groups where they can gain confidence in themselves and avoiding sharp contrasts with other groups. Motives for grouping children varied, ranging from grouping because it was "the thing to do," to grouping because it facilitated learning. In the two fourth grade classes grouping was more advanced because the teachers had developed a more sophisticated program, one which was created with purpose and understanding. The classes were grouped for mathematics with the slower children in one class and the more able in another. One teacher taught the science program for all fourth graders and the other taught social studies. Thus, the children actually switched classes several times during the day. This mobility tended to break up some of the atmosphere and problems of the self-contained classroom situation which will be discussed in Chapter 4.

3. Staffing Pattern

Within the self-contained classroom situation each teacher is essentially charged with the responsibility for what his homeroom learns during the course of the year. In the control school there were eight female teachers, each of equal status, and each of whom was responsible for and generally had a total control over their individual homerooms. Although teachers in the same grade tended to communicate with each other and to make certain arrangements for grouping, the teachers commented that they had little or no time to communicate professionally with each other during the school day and rarely met after school. Roving teachers in physical education, music, and art were generally isolated from the other teachers and the program as a whole. There was limited contact with a guidance counselor or the principal, although the latter made a point of contacting any teacher who asked to see him. The principal occassionally substituted in a classroom in emergencies and observed each teacher once or twice during the course of the year. A reading adviser was also assigned to the building but was not utilized unless requested by the teachers--which rarely occurred. A mathematics specialist, responsible for all elementary schools in the district, was also available. (All specialists and special subject teachers were in a staff relationship with the building teachers and were technically responsible to the building principal. Generally, the teachers appeared to prefer being left to themselves.) Student teachers from a neighboring college worked with teachers at various times during the year for their practicum.

4. Administrative Guidelines

According to the teachers at the control school, the only goal which was actually articulated by the school district was that of "individualized instruction." However, teachers appeared to lack an understanding of what individualized instruction meant, and consequently it was defined and practiced differently by each teacher in the school. Although a sound individualized program was evident in certain classes, in many others there was little appearance of any effort on the part of the teacher to implement any sort of individualized program.

Aside from this general guideline, teachers commented that approaches in the classroom were left to their discretion except for some suggestions on the use of certain texts and the avoidance of certain instructional approaches. Some pointed out that a first-year teacher would probably be at a loss because of the lack of guidelines. Another teacher ironically pointed out that, although there were no broad guidelines, the district seemed to be becoming progressively more concerned with minor details and to be more restrictive in this sense.

5. The Program

Essentially each classroom at the control school had a program which was dependent primarily on the competence and creativity of the individual teacher. As a result, programs covered a broad range. The average teacher evidenced little sign of having any sort of a program at all except to fill the day with activities which were fragmented and content (rather than process) oriented. The most evident instructional approaches at the school were workbooks and drills.

Other than these general observations, the instructional approaches, curriculum, and program to which the child was exposed depended solely on the quality and personality of the teacher.

B. The Experimental School, A Continuous Progress Program

The continuous progress program cannot be viewed as simply an example of a nongraded school: to do so would be to shortchange its value considerably. Nongrading, interest grouping, constant teacher education and professional intercourse, and a constant effort to evolve and improve the program were the four vital aspects of the program. Continuous progress implies the continuous growth of not only the children, but also of the teachers and of the program itself.

1. Grouping of Children

The children in the experimental school population were placed in one of two divisions (primary or intermediate), depending upon their age. Children of five, six, or seven in September were placed in the primary division. Children of eight or nine in September were placed in the intermediate division. The primary division was divided into a lower and upper level. At the beginning of the year children in the lower primary were at the oral language stage; those who were beginning to build a "sight vocabulary" and to read their first books were in the upper primary. In this experimental school children were grouped homogeneously according to achievement (given that they were within a certain age span) for language arts and mathematics. There were eight language levels and twelve mathematics levels, each a logical progression in the way that a child learns language or computational skills. Generally, children in a given language arts class encompassed at most one level of development, though there might be several classes working at that level. As soon as a child mastered one level, he was assigned to a teacher who was working with children at the next level.

The continuous progress program operated in the following manner: the teacher was able to assess the level at which each child was working because of certain established criteria for completing each level. In language arts, once the teacher determined that a child had completed all the tasks of a given level, a reading adviser would confirm the diagnosis by giving the child a short but comprehensive set of tasks to perform. If he completed these tasks successfully he was placed in a higher level. In mathematics the teachers diagnosed and placed the children themselves. Children did not receive marks at the experimental school, but rather the teacher provided periodic reports to parents on each child's progress. A child could advance in level whenever he completed the previous level on which he was working, and parents were informed accordingly. The following pages present examples of the criteria for successfully completing language levels IV and VII and mathematics levels IV and X. (See Exhibits A, B, C, and D.)

Teachers in the lower language arts levels taught higher mathematics levels in the same division so that each teacher had an opportunity to work with a variety of children. Children spent about one hour each day in the mathematics classes and another hour in the special emphasis periods described below. The remainder of the day was spent in the homeroom/language arts situation, with language arts being interpreted as encompassing the social and physical sciences as well as specific language skills since these aspects of human life and endeavor are so closely related to the development of communication skills. Thus, in the course of one day each child would generally have three different teachers (plus the special subject teachers).

The special emphasis time (one hour each day) gave the children an opportunity to pick topics of special interest within the

Exhibit A. Level IV. English Language Skills.

_____Can follow simple written directions involving one or two steps

_____Can follow oral directions involving a series of steps

_____In discussions, can ask relevant questions, can respond appropriately to the contributions of others, and can then summarize by telling what the discussion was all about

_____Can evaluate success in planned activities

_____Can efficiently articulate the proper sequence of events taken from a variety of stories and life situations

_____Can classify and categorize behavior, events, and objects into several categories

_____Can conceptualize the relationships between events and the proper sequence of the days of the week, months of the year, and seasons

_____Hears rhyming sounds, initial consonants, blends, and such simple endings as: s, ed, ing, ly, er, and simple compound words

_____Can use context and configuration to figure out new words

_____Reads orally simple charts, stories, poems, and books such as: It Looked Like Spilt Milk; Where Is Everybody?; Come and Have Fun; I Know A Story; A Fly Went By; Go, Dogs, Go!; Big Ball of String; Story Fun; Little Bear; Have You Seen My Brother?

_____Can copy a story, letter, or a poem of several lines

_____Can write brief accounts using phonetic spelling

_____Can do simple guided research using pictures in books and direct observation of simple classroom experiments

_____Can select appropriate books to take home to have read or to read to himself

_____Can use simple picture dictionaries

_____Can predict outcomes of situations encountered in filmstrips, books, etc.

_____Can recognize up to 250 words that are simple in structure and used with great frequency

_____Can name and discriminate primary and secondary colors

Exhibit B. Level VII. English Language Skills.

_____Is able to sense the organization of spoken material and recognize correct spoken English usage

_____Is able to respond to the sounds represented by symbols in the dictionary (phonetic spelling)

_____Is able to hear syllables in words and to recognize accented and unaccented syllables

_____Can compose haiku poetry--also taka, seven-line Japanese poetry

_____Is able to use cursive writing effectively

_____Can take notes and develop outlines

_____Can arrange ideas in sequence and develop correct paragraphing

_____Can observe the conventions of sentence form

_____Can write a rough draft, correct it, copy it over, proofread it

_____Creative writing now regularly includes abstract ideas and sensory images

_____Is able to read orally, with good, clear communication, materials selected to meet special needs or purposes

_____Can interpret different types of maps, globes, graphs, charts, and tables

_____Can alphabetize and use dictionaries intended for upper elementary use

_____Can use card catalog to find materials

_____Is able to read such books as: _Strawberry Girl_; _Misty_; _Owls in the Family_; _My Side of the Mountain_; _Rabbit Hill_; _Little House in the Big Woods_

_____Has developed meanings for abstract words such as courage and loyalty

_____Has become aware of the significance of punctuation marks and their effect or meaning

_____Reads silently more rapidly than orally and has begun to adjust rate to suit purpose for which material is being read

_____Can recognize all words that are a part of his speaking-listening vocabulary

_____Recognizes the importance of following steps sequentially in performing an experiment or following a recipe

_____Can write, independently, personal and simple business letters

Exhibit C. Level IV. Mathematics Skills.

I. Writing numerals 0 through 9

A. Can reproduce a requested numeral by writing it.

B. Can recognize the cardinal number of a set and write the representative numeral.

II. Sequence--Patterns

A. Can arrange numerals from a random assortment to an ordered arrangement.

B. Can recognize the missing numerals from a unit sequence and write same.

III. Addition

A. Understands missing addend concept by performing appropriate computation. For example: 3 + __ = 5.

B. Can use the terms sum and addend appropriately.

IV. Subtraction

A. Can identify the sum and addend in a subtraction problem. For example: 5 - 2 = 3; 5 is the sum; 2 and 3 are addends. After the very brief, initial take-away concept, subtraction is understood in terms of addition.

B. Can use greater than and less than symbols between two digits--0 through 9.

V. Combinations

A. Understands and computes all addition and subtraction combinations through 9.

Exhibit D. Level X. Mathematics Skills.

I. Number Theory

Demonstrates a knowledge of the terms multiples, factor, product primes; i.e., list the factors of 24 and circle the prime factors. From a given group circle the multiples of 10. Write the multiples of 4 and 7 through 50. Are there any common multiples?

II. Division

A. Can perform simple division problems using the number line, i.e., 40 divided by 8.

B. Can identify factor and product in a division problem, i.e.,
7 equals 28 divided by 4.
F P F

III. Multiplication

Can multiply one digit numeral by 10 and 100, and multiples of these; i.e., 3 x 40, 5 x 300. Can use the multiplication algorithm with a 4 digit factor, i.e., 4 x 2573.

IV. Coordinates

A. Can graph number pairs in 1st quadrant; i.e. graph the points: (3,2) (3,6) (7,6) (7,2).

V. Verbal Problems

Can solve one-step problems involving the four operations.

VI. Place Value

Can write numbers from dictation up to 1,000,000. Can use greater than and less than between two numbers up to and including 6 digits.

framework of curriculum planning. Each teacher generally took a different topic for special emphasis. Topics were pursued for two to three weeks. These special emphasis groups involved a mixture of all children within the division regardless of level of performance. Teachers decided on the topics for special emphasis during planning sessions on the basis of the expressed and inferred interests of the students. Then, during language arts/homeroom, the children were given a list of the subjects they could study. Each child selected his first, second, and third choices. Based on the pupils' selections, each teacher placed approximately an equal number of children in each group so that the children from different language arts classes would be well mixed. However, this meant that students did not always get their first or even second choice. During transitions to different special emphasis groups there were sometimes gaps of three or four days during which the children spent that extra time in the homeroom/language arts classes.

Of course, in practice, the actual grouping of children can never reach the ideal theoretical level. However, with constant attention to revision by reading advisers and teachers alike a noticeable improvement in grouping did occur during the course of the year. During the first observation period the observer noted that in some classrooms there were as many as three different levels of children in the same language arts or mathematics grouping. Of course this was the first year of the program, and without previous continuous progress records it had been impossible at the beginning of the year to place all of the children correctly. A major adjustment in groups occurred just before the second observation period. (The reading advisers commented that they hoped this would not occur again but they found this adjustment necessary the first year of the program.) With this shift the grouping became much more satisfactory, although there were a few problems involving children who had severe educational or emotional handicaps.

There were still some difficulties with grouping at the end of the year. According to several teachers some language arts levels had vaguely defined criteria which could be interpreted in several different ways. This led to some divergence in diagnosis between the teachers and reading advisers. As a result some children who were close to the completion of a level sometimes were placed with children just beginning the level.

Grouping in mathematics was never perfected because the mathematics specialist, the only one in the school district, had other responsibilities and, for various reasons, was not able to contribute sufficient time to ensure that the mathematics program was constantly re-examined and revised during the course of the year.

Certain side effects of the grouping bothered some teachers. Several of them acquired more than an average number of children with educational and behavioral problems, and these teachers experienced many trying and exasperating moments. In some classrooms teachers felt that certain older children sometimes provided negative examples for the younger children who were at the same level in language or mathematics skills. However, most teachers found this form of grouping to be the most effective way of teaching children and were pleased with the results.

2. Physical Arrangement

The experimental school included fourteen classrooms arranged in the traditional manner with each room opening only onto the corridor, and not into any other rooms. The only exceptions to this arrangement were the two rooms which housed the children working in the lower language arts levels within the primary division: each had a door with access to the playground and an opening the size of a door between the two rooms, allowing children to move back and forth easily. These two classrooms were in the lower level along with the kindergarten rooms, which did not participate in the experiment. The upper primary was housed in six rooms along one corridor while the intermediate was divided with three rooms over the lower primary corridor and three in an adjacent corridor. The building was small enough to permit children to move quickly between any two rooms.

The school included among its facilities a well-stocked library, supplemented by borrowed materials from other libraries in the school district and other sources; an all-purpose room with stage which served as a cafeteria, recreation room, and auditorium; a room which was frequently used for art (though art was taught in the individual classrooms as well); and a large playground.

The experimental school had television facilities readily available to all classes and a wealth of books and instructional materials which had been carefully collected by the staff from various sources. Most classrooms had a variety of tools with which the children could learn to manipulate and understand objects and concepts. Almost every classroom had at least one animal--gerbils, guinea pigs, hatching chicks, rabbits, turtles, fish, and/or ducks. The lower primary especially provided a number of animals for the children to care for and learn to play with and handle, and numerous construction materials.

In most rooms many of the objects, charts, and instructional materials were made by the children themselves rather than by the teachers; this contributed to a gay and festive air of creativity and vitality. In a real sense these rooms seemed to need less educational equipment because the children generated instructional materials themselves--charts, pictures, a model castle, illustrations of dinosaurs, murals of animal and insect life, simple machines.

At the experimental school materials moved smoothly and automatically from teacher to teacher: teachers shared materials, films, and teaching aids, passing them around or combining classes for optimal utilization. Last minute changes in planning to utilize new materials was not seen as a disruption of the day, but rather as an opportunity for the teachers to enhance the instructional program.

One problem with supplies, which was especially common early in the year, was that materials tended to be scattered as children moved from room to room because they would take or leave pencils, scissors, crayons. Teachers found it difficult to keep supplies in the appropriate rooms.

3. Staffing Pattern

There were four basic components to the staff of the experimental school: the principal, five advisers or specialists (a reading coordinator, three reading consultants, and one mathematics specialist), fourteen female classroom teachers, and the teachers of special subjects such as art, music, and physical education. In any building in the school district all teachers, specialists, and special subject teachers were responsible to the principal, who was the ultimate authority in his building. In the experimental school, the principal was a vigorous leader with a strong commitment to making the continuous progress program a success.

All specialists were involved in other schools in the district, as well as in the experimental program. But in the case of the reading advisers, there were sufficient personnel to ensure that the experimental program was not shortchanged in the fulfillment of obligations to other buildings. The reading coordinator for the school district was directly responsible to the assistant superintendent for instruction and worked in a staff relationship with the reading consultants. However, whenever there was a conflict, the consultants accepted the decision of the coordinator. The reading advisers were individuals of varying personalities who functioned in two capacities at the experimental school: several of the advisers, including the coordinator, had become thoroughly immersed in creating and effecting the continuous progress program and exerted additional leadership in its development. All reading advisers also functioned as resource people who actively participated in the diagnosis of individual children and in helping individual teachers to improve their teaching techniques. As a result of the dual role, there was some confusion and conflict over whether the reading advisers had a leadership or a professional advisory role. In fact, in different situations they functioned in both roles.

Of the fourteen classroom teachers there were two in the lower primary, six in the upper primary, and six in the intermediate division. Although each was essentially autonomous in the classroom, teachers were involved in constant professional interchange with each other, the principal, and the reading advisers. (The decision-making process included all three groups.) The special subject teachers integrated into the program whenever possible: the piano and art supply cart were frequently wheeled into the classrooms. The art teacher spent free periods helping teachers and children to develop projects which were appropriate to specific aspects of the language arts or special emphasis programs.

The staffing pattern of the school was rather complex. There were three "basic units of professional function"--the principal and reading advisers, the primary division teachers, and the intermediate division teachers. The basic units of professional function refer to groups of individuals who are in total professional communication--i.e., who are constantly interchanging information and concerns among themselves--and who act as a unit performing distinct functions in the program. The principal and reading advisers (the program leadership) performed the basic functions of leadership and expertise. The teachers in each division performed the function of operationalizing the program in their own divisions. In actuality, the roles were not so well defined: some teachers also functioned informally in roles of leadership and/or expertise, and the principal and specialists were vital to the operationalization of the program.

There was constant two-way professional communication between the program leadership and the primary division, and between the program leadership and the intermediate division. Professional communication between the teachers in the primary division and teachers in the intermediate division occurred less frequently because the two divisions operated independently and with little reference to each other. Formal authority in the staff rested solely with the principal, although the reading advisers also functioned as part of the program leadership. The mathematics specialist, less involved in the program than the reading specialists, nevertheless maintained professional communication with the principal and with the two divisions. Special subject teachers and outside resource personnel also maintained professional communication with the three basic units of professional function.

As this staffing pattern was conceptualized, the entire staff constituted a team: professional interchange among principal, advisers, and teachers should work so smoothly that the use of formal authority is minimal. In fact, this was sometimes the case--especially in the relationship between the primary division and the program leadership.

Within the school the principal held the unquestioned role of ultimate authority which was respected by both teachers and specialists. However, his position was somewhat difficult because of the conflict between his efforts to develop a democratic professional interaction among the entire staff and his determination to ensure that the experimental program was implemented by utilizing his authority when necessary. The efforts of the program leadership to create a balance between these two goals created an atmosphere in which informal teacher leaders functioned and conflicts developed over interpretations of the program, its worth, goals, and means of implementation. The observer never was aware of any conflict of goals and means between the principal and reading advisers: the relationship was one of intense professional commitment to a mutual cause which did not generally require drawing the lines of formal authority.

Relationships among the teachers within each division (particularly the primary division) were on the whole extremely cooperative, supportive, and helpful; there was a strong peer group for individual teachers to fall back on. Informal teacher leaders emerged in both divisions who exerted a great deal of influence on the other teachers and their attitudes toward the program and the formal leadership.

The dramatic contrast between the staffing patterns of the experimental and control schools was the result of the experimental school's structuring of the staff and program, maintained through constant professional interaction and the internal dissemination of information and techniques. Early in the year the experimental school inaugurated weekly planning sessions in language arts for each division as a vital part of the program. The purpose of the planning sessions was to give the teachers an opportunity for professional exchange of materials, ideas, and concepts and to develop goals and ways of implementing them through curriculum planning. Through these group planning sessions the teachers, with the assistance of the principal and reading advisers, could develop concepts and guidelines which could be built into highly individualized programs in the individual classrooms. The planning sessions were more successful for the primary than the intermediate division, and individual teachers also benefited to differing degrees. This will be discussed further in Chapter 4.

One significant difference between the two schools was that the overall ability of teachers to provide a better learning atmosphere appeared to be higher at the experimental school, although there was great variation among the teachers in both schools. Variation in quality refers to the variation among staff members in characteristics which contribute to good or poor teaching. This becomes, of course, a strong argument for a continuous progress program which can better utilize teacher resources. It was also noted that the competence of the experimental school staff seemed to increase during the course of the year while that of the control school appeared to remain static.

4. Administrative Guidelines

One other major difference between the experimental and control schools was that the program leadership at the experimental school articulated a set of goals and the broad guidelines for implementing them. The mathematics specialist was also involved, but to a lesser extent. The broad guidelines which were effected include the basics of the program: (1) the continuous progress program itself, with grouping by level of mastery in language arts and mathematics, and grouping by interests for special emphasis periods; (2) flexible movement of children from class to class and from situation to situation; (3) a constant emphasis on teacher education, dissemination of concepts and approaches, and continuing evaluation of the program on a day to day basis; (4) a flexible curriculum which grows throughout the year according to the needs and interests of the children. Given these basic guidelines, all other aspects of the program were seen as evolving through the interaction of children, teachers, and program leadership on a week by week basis as approaches and activities were evaluated and improved.

The program leadership, having developed this program after careful study and years of experience with children, was certain of program goals and of the importance of operationalizing them with as little compromise as possible in order to test their validity in the education of children. As a result, they exerted a strong leadership and influence in their determination to implement the program--although their efforts met with varying degrees of success among different teachers and in different divisions. Because of the commitment of the program leadership, the teachers did have a set of guidelines with which to work, a blueprint which they could follow in their own individual ways, and this fostered a coherent educational program--

meaningful to students--built upon the efforts of many staff members.

Although some teachers reported that they were very satisfied with the guidelines and goals expressed and fostered by the program leadership, there were two teacher complaints: some teachers, especially in the intermediate division felt that there was too much leadership interference, although all admitted that neither the reading advisers nor the principal interfered in their individual classrooms. Several other teachers, especially in the primary division, complained that the guidelines were too broad, that they needed more specific guidelines for specific situations, and that they were at a loss as to how to implement the program although they were willing to do so. The dilemma for the program leadership was that of walking the tightrope between too much and too little control over the teaching staff, a problem which is discussed further in Chapter 4. For some teachers, especially those who were less committed to the program, the principal and reading specialists seemed too involved and restrictive; for others who were more committed to the program, but who lacked the imagination and creativity to implement it in their classrooms on the basis of broad guidelines, their participation seemed to be inadequate. One of the most vital concerns of the formal leadership was striking a balance between development of the program and insistence upon certain broad goals and guidelines, and providing teachers with optimal flexibility in developing their own programs within these guidelines. This problem is not easily solved and calls for a program leadership of the highest order.

The planning sessions, when functioning smoothly, were opportunities for professional exchange where information and concepts could be presented, disseminated, and evaluated. This provided an excellent weekly opportunity to measure the actual program in terms of its goals and to insure that activities and instructional methods were adapted throughout the year to meet the needs and interests of the children.

5. The Program

It is quite evident that there was a well-articulated program at the experimental school--a program which predominated the entire instructional process. Almost all classrooms in the school were touched in some way by this program, and many were deeply immersed in it. The structure of the school seemed to impose itself to some degree upon all classrooms. The teachers had no choice but to participate in the changing of classes by children for need and interest groupings and this in itself changed the flavor of the classrooms, disrupting the self-contained situation which isolates the teacher and gives him total authority over children. In this experimental situation, because outside influences cannot be prevented from penetrating the individual classroom, there is a healthy cross fertilization of ideas and approaches, which can promote spontaneous growth in all but the most rigidly self-shielding teachers.

The weekly planning sessions and constant professional exchange also served as points where the program itself was infused into the bloodstream of each classroom. The strong leadership of the principal and reading advisers, combined with the structural aspects of the program, provided guidelines which teachers could follow and utilize in the classroom. This kind of situation tended to disrupt any possibility of a "workbook" or "drill" mentality, so that although a few less resourceful teachers still fell back upon such activity, for the most part it had disappeared and had been replaced with process-oriented approaches.

Of course there were several problems with the program: first, as was mentioned previously, it appeared to function better in the primary than in the intermediate division because of differences in acceptance of the program and the leadership by the teachers, although the test results and teachers' attitude measures do not reflect this. Second, there was variation in the quality of the language arts program and the mathematics program.

C. Conclusion

This chapter was concerned primarily with a comparison of the programs, physical arrangements, and staffing patterns between a graded school and the continuous progress program. Illustrations concerning the control school are not unique to this school, but rather apply to most graded schools.

Typically, in a graded situation the child is with one teacher most of the day, and is dependent upon that teacher as an authority figure and as the satisfier of most needs. In contrast, the continuous progress program, besides being nongraded, is based on achievement and interest groupings. Here the child is more involved in a child-centered "learning" environment in contrast with a teacher-oriented "teaching" environment.

The physical arrangements differ as well, not so much in terms of the actual physical arrangements of the buildings but in terms of utilization of the physical facilities. Although some efforts were made to develop a cluster approach in the graded school, they failed because other elements essential to a cluster approach were not employed. The self-contained classroom, for example, minimized the utilization of instructional materials of the entire school--in contrast to the continuous progress program.

The staffing arrangements of the graded school isolated the individual teacher from the other teachers and leadership, particularly in a professional sense. Although teachers in this school spoke of their classroom approaches as "individualized programs," it was quite evident that their understanding of the concept varied and was limited, and thus a truly individualized program was rarely implemented. With an understanding of the goals of the continuous progress program, the teachers in the experimental school were able to apply this approach, aided particularly by the strong support and philosophical understanding of it demonstrated by the program leadership. What was lacking in the continuous progress program was staff differentiation which would have permitted a more efficient use of teacher resources.

The program in the graded school tended to be static, while that of the continuous progress program was an evolving one in which a meaningful educational program was being built through the joint professional efforts of the teachers and the program leadership.

CHAPTER 4

PROGRAM STRUCTURE AND STAFF CHARACTERISTICS: VARIABLES WHICH AFFECT THE QUALITY OF AN EDUCATIONAL PROGRAM

This chapter examines the effects of the structure and characteristics of the staffs of each school on the educational programs. Essentially, it deals with the ingredients which contribute to the development of a good or a poor school environment. The concern is not directly with the qualities of the programs themselves, but rather with some of the variables which affect that quality. This chapter complements Chapters 6 and 7, which consider the quality of the educational programs at the experimental and control schools.

A. Four Significant Variables

In the course of the observation periods, it was noted that four variables seem to have the greatest impact on the educational program of a school. These variables are the structure of the school, the leadership and expertise, teacher quality, and teacher attitudes toward the overall program.

The structure of the school involves its organization: the grouping of children and the utilization of teachers and other professional staff. In the control school this structure was essentially that of a graded school with self-contained classrooms. The experimental school, on the other hand, was a continuous progress program with an emphasis on nongraded and interest grouping, teacher education, and continuous curriculum planning.

Leadership and expertise concern the role of administrative and consulting specialists in the school. Leadership implies a certain amount of aggressive and creative zeal in developing and maintaining a program which is felt to be worthwhile. Ideally, experts are utilized constantly to validate and improve the program in terms of the newest and most promising educational concepts and approaches. Teachers of the control school seldom called upon the administrator or utilized specialists, **while at the experi**mental school the administrator and specialists were not only available but constantly exerted their influence over the direction of the program.

Teacher quality concerns the personal, intellectual, and instructional capabilities, and the attitudes about children, of the individual staff members of a given school. In both schools the quality of the teachers varied considerably.

Teacher attitudes include attitudes toward the school program and toward other teachers and professionals in the school. Teacher attitudes toward the school program are most significant in a school concerned with a team effort, such as the experimental school, where a certain esprit de corps is vital to the working of the program. Attitudes seem to have little effect on the teaching program as a whole in the self-contained situation because the teacher tends to be isolated in his own classroom.

These variables are all interrelated. In the self-contained classroom situation, where the structure of the school presents barriers to optimal utilization of leadership and expertise, the quality of teachers becomes very significant. Because the program is essentially what each teacher has created in his own classroom, it varies significantly from class to class. Almost all variance may be accounted for in teacher quality.

At the same time, a school with a structure such as the continuous progress program tends to encourage visible and vigorous leadership and expertise. In this situation, teacher quality becomes less significant. Somehow the structure and leadership explain more of the variation in teacher quality, imposing a more uniform quality upon the teachers such that even the average teacher is able to carry on a program at least somewhat consistent with the goals of the school.

These variables interacted in the experimental and control schools to produce the following differences in the school programs:

In the control school, with its self-contained, graded structure, the opportunities for optimal utilization of leadership and expertise were lessened. Thus, it was difficult to incorporate a program of continuous teacher education, the dissemination of professional information, continuous professional interchange, and constant program evaluation and improvement. As a result, it was also very difficult to build a sound educational program (according to the standards listed in Chapter 5) and to improve the quality of instruction. Under such circumstances, the quality of the teacher in the individual classroom becomes the crucial variable in each child's educational experience. A child may have a stimulating or stultifying school experience for the entire year, depending on his arbitrary placement with an excellent or poor teacher. When teachers are isolated in the individual classroom and thus do not experience intensive peer and leadership support, teaching is likely to be teacher centered, rather than oriented to the needs of children. Because there is a minimum of supportive interaction the teacher tends to lack identification with the school or with fellow teachers. Thus his attitudes about education reflect his feelings about his own teaching experience in his individual classroom. The self-contained situation makes it difficult for the teacher or the program, and thus for the children, to grow in optimal ways.

The continuous progress program of the experimental school attempted to eliminate these pitfalls to successful implementation of quality education with five major innovative goals: nongraded grouping, interest grouping, continuous curriculum planning, constant teacher education and professional interchange, and continuous evaluation and improvement of the program. Thus, the continuous progress program attempted to attack problems of educational innovation from the point of view of child, teacher, and program growth. As a result of this three-pronged attack, the experimental program succeeded in developing an educational program with a great deal of potential to evolve and grow. (The program, of course, did not reach its ultimate potential during the first year of operation, which was essentially a year of transition, but it was in the process of moving toward its goals.) Teacher education, dissemination of information, constant professional intercourse, and program evaluation and improvement were encouraged by weekly planning sessions, special in-service programs, and constant professional interaction throughout the school day. Teachers were able to develop strong peer group and leadership support which helped them to face problems and crises and to grow with them. This constant focus on growth and development appeared to contribute to the improvement of the program.

Several problems connected with the program were not solved during the first year of operation. The group dynamics of the primary and intermediate divisions differed so that the primary group developed informal leadership supporting the program leadership and their goals, while from the intermediate group an informal leadership emerged which tended, in certain instances, to operate contrary to the goals of the program. However, the program was implemented in varying degrees in each of the divisions. Teacher adjustment was another problem which contributed some obstacles to the development of the program.

Despite these problems, the structure, leadership, and staff characteristics of the continuous progress program provided a situation in which teacher, program, and thus child growth could be greatly advanced over the self-contained graded situation, in which little change was evident during the course of the year. The continuous progress program seemed to be pointing in fruitful directions for the development of an optimal educational program.

B. The Control School

1. Structure of School/Leadership and Expertise

A self-contained, graded situation such as the control school, by isolating individual teachers, obstructs the building of a sound educational program by creating barriers to teacher education, to the dissemination of information, and to program evaluation. Strong leadership and constantly utilized expertise are vital aspects of any vigorous, developing educational endeavor. The isolation of the self-contained classroom hinders both the free flow of information and the efforts of leadership to develop a program. There is a natural resistance to the impingement of any external forces into the teacher's private territory. As a result, even the most competent leadership and specialists may find it very difficult to challenge the teacher's ultimate total control. (There are a few brillant exceptions to this rule, where the self-contained situation has been developed into an excellent, innovative, and dynamic educational program, such as the Leichestershire schools of England [Central Advisory Council for Education, 1967], but these are rare and require qualities of leadership which are not generally present in the public schools.)

As a result of the problems and general quality of the public schools, the self-contained situation is likely to promote a static and diffuse program, and order and achievement frequently become the criteria for success in the classroom. There is likely to be little growth from year to year. Each teacher essentially develops his own program. Many teachers easily fall into the rut of the workbook mentality: those who have no guidelines for pacing and evaluating different activities and methods fragment the day unnaturally, rushing some subjects and wasting time at other moments to fill in the day. Without dissemination and evaluation every innovation quickly falters and the previous status quo re-emerges.

Where teachers are uncertain as to their goals and approaches, order and achievement are likely to become the criteria for competence and the possibility of a child receiving an optimal education diminishes. These problems are examined in greater depth as they appeared at the graded school.

a. Difficulty in Developing a Program and in Improving the Quality of Instruction.

Improving the quality of instruction and developing an educational program in the self-contained graded situation is a precarious and difficult process. The self-contained classroom is by nature isolated from outside influence--from other teachers, from experts, and even from the school leadership. In a school where pupils spend most of the day with the same twenty to forty children and with one teacher who is developing his own program it is exceedingly difficult to build and implement a comprehensive, vibrant program which can be utilized by all teachers.

Essentially each teacher has his own program, varying in quality depending on his unique abilities and characteristics. Thus, as the child progresses through school, there is no consistency, no plan in what he is learning. Instead he moves from year to year through a mish-mash of inconsistency. This, of course, promotes a shallowness of instruction and of learning, which leaves the fundamental processes of cognitive development untapped.

When teachers are isolated in self-contained classrooms, three vital aspects of teacher and program growth are severely hampered: continuous teacher education, dissemination of information and concepts, and continuing evaluation of the program. The teacher is not challenged to move beyond his present level of development. There is no way for the average teacher to make judgements about the quality of different activities and methods, no way for him to intuitively develop an optimal program.

Lack of Teacher Education. When teachers do not grow, neither does the instructional program. It remains static; it is predictable and consistent. Since each teacher is involved in his own individual program and is not being exposed to valuable interchange with fellow professionals and experts, no matter how excellent he is the program in most cases will remain fixed during the year. With average or poor teachers, this stagnation is inevitable, and even with excellent teachers it is likely to occur. It was noted that there was little change in the program as a whole or in most individual classrooms at the control school over the course of the year.

Generally, teachers will not voluntarily involve themselves in professional exchange and continuing education. The duties of a teacher are sufficiently heavy that he is inclined to avoid any activities except those most essential to his daily work. Teachers tend to be reluctant to use non-school time for "extracurricular" educational or professional activities.

Faulty Dissemination of Information and Lack of Professional Interchange. Another serious problem is that of disseminating goals, information, and a program. In a self-contained classroom situation teachers may lack a sense of goals, may have few guidelines as to how they should proceed. There may be confusion about what should be done in the classroom because of the difficulty in disseminating concepts and information. As a result the teacher's goals are frequently his own and not those of the school itself.

Several teachers at the control school commented that they felt that there were no real guidelines for them to follow, that they had to work out all of their instructional program and problems for themselves. They then simply presented their ideas to the principal, who usually approved them. Teachers did feel that they could see the principal whenever they wished to and realized that they must take the initiative.

Teachers stated that "individualized instruction" was the basic goal of the school district but indicated that they lacked a full understanding of the concept. Some felt overtaxed because they had no meaningful ways to diagnose and then follow up with each child for "individualized instruction." Thus, individualized instruction became something different in each classroom. It was individualized only in that every teacher had his own program. Ironically, in many classrooms this meant that the instruction was teacher-centered, not child-centered.

Statistical analysis of the teacher attitude scale administered at the experimental and control schools indicates that teachers at both schools felt that the goals of their particular school programs closely approximated what they would consider to be the ideal goals of education (see Chapter 8). This was due to different factors in each school. It was observed that in the graded school each teacher developed his own program and thus program goals were his own ideal goals. In the continuous progress school, though this same element operated to some degree, the program had influenced teachers, and their individual goals were consistent with the goals of the program. It is for this reason that the experimental school teachers were more process oriented; e.g., they gave less emphasis to the importance of knowledge of subject matter (and slightly less importance to skill acquisition) and more emphasis to the appreciation of art, music and literature.

Aside from the problems of education and dissemination, the most serious problem in a self-contained classroom situation is a lack of means for evaluating the programs in individual classrooms. Without constant evaluation by the teachers themselves, by school personnel, and--when possible--by outside experts, no program can grow and develop. Constant reassessment and modification are necessary to any vigorous, meaningful program. The teacher seldom interacts with other professionals and is rarely observed by others, except for the occasional and usually pro forma visit of the principal once or twice during the year. No matter how excellent he may be, he has little opportunity to grow through experiences with fellow professionals. Many of the teachers at the graded school commented that they had little or no time to interact with other teachers even in the cluster areas, with the possible exception of the teachers in their own grade levels with whom some did grouping for mathematics or reading.

Resistance to Program Evaluation. The self-contained classroom naturally isolates teachers and puts them in control of the classroom and of what happens there. Thus they are more threatened by the approach of someone with expertise than teachers who are constantly exchanging ideas and techniques in a more open situation. Since teachers have almost exclusive responsibility for the education of the children in their own classes they tend to feel more defensive about and ego-involved in the achievement of these children. It was observed that many of the teachers at the control school were concerned about the achievement of their classes on tests and other tangible measures and put pressures on the children to achieve. It was frequently evident that they viewed the visit of a specialist, or the principal (or an observer), as an intrusion into a private realm. Comments reflecting this view were frequently made. Although specialists in reading and mathematics were "on call" they were rarely contacted. Some teachers commented that they preferred a principal who "never bothered them," but rather left each to his own resources. Given such teacher resistance and total control in the classroom, it is more difficult to institute or carry out an effective program evaluation.

Innovations Revert to Previous Practices. Another problem in a self-contained, graded school is that even innovations may become the previous program in disguise. Attempts to implement new concepts may quickly revert to the status quo when there are no regular and constantly used channels for education, information dissemination, and evaluation. Even the most modern architectural and instructional advantages may be poorly utilized. In the control school teachers had difficulty conceptualizing how to utilize the cluster arrangement, and as the day progressed more and more teachers shut the dividers between classes so that by early afternoon the cluster simply became six walled-off rooms. The idea of utilizing the cluster for a freer flow of children and teachers was foreign to them. Many teachers had little comprehension of how to utilize this kind of structure, or of what flexible grouping and team teaching really meant. The morning gathering in the middle of the cluster frequently resulted in bored and restless children. Teachers often spent much of this time period disciplining the restless ones while one teacher lectured to the group or led singing. The cluster idea was finally discarded in the spring as being unproductive. There was some interchange of children among classes during the day, but the exchanges were limited to times when children gathered to watch television or a special presentation. As one teacher put it, "We really have no use for the cluster; we could do all the same things in self-contained classrooms."

2. Teacher Quality/Attitudes About Program

a. The Teacher is the Independent Variable.

The most striking aspect of the self-contained classroom situation is that the teacher is the independent variable. No matter what kinds of instructional equipment, sophisticated methods, and expertise are available, and no matter what goals the school district may have, in the final analysis whether a child is in a satisfactory learning environment at a given grade level depends primarily on the competence and personality of his teacher. Each child is assigned to one classroom for an entire year with one teacher. For the fortunate child this may mean an exhilarating, challenging, and growth-promoting experience and for the unfortunate one it may mean a dull, uninspiring, and perhaps even negative experience. Even if the child changes teachers for short periods of reading or mathematics, this hardly can be said to counterbalance the pervasive and overwhelming influence of the classroom teacher.

The self-contained situation normally does not allow for differences in personality or needs which might require that, for the sake of both teacher and child, the child be moved to another room. There is little give and take to provide for the inevitable differences in people which might make even the best teacher the wrong teacher for a particular child.

With self-contained classrooms every child in a given school is bound to have at least one incompetent teacher for an entire year at some point of critical development--and he has no recourse except to make the best of that year in whatever ways he can. The child with a teacher who is unable to cope with the personal and educational needs of the class has nowhere to turn. His only hope is that he might spend an hour or two with another teacher in some ability grouping situation, if his school practices this at least to a limited degree. By the same token, the child with a competent teacher in a self-contained classroom experiences a meaningful program, built and executed by the teacher himself. Though he might spend a few hours with an incompetent teacher, usually he is surrounded with a stimulating learning situation. The good teacher has a room full of highly motivated and responsible youngsters. The poor teacher has a group of bored, hostile children who have found that "adjusting" is easier than constantly fighting. They are marking time in school and show little creativity or spontaneity in the classroom.

The good teacher is affectionate, accepting, and supporting, encouraging the child to work to his own potential, questioning him perceptively to stimulate his mind, utilizing a subtle but effective structure of goals to bring about the optimal learning situation. The poor teacher is unaffectionate and authoritarian, and often dissatisfied with himself. He is constantly tired and worn out, viewing teaching as a "job" and is preoccupied with the "performance" of the children. He tends to be picky, frustrated, self-centered, and ignores the children in considering their instructional "program." He frequently handles the "failure" of children very poorly.

Drill and workbooks are the easy way out for certain teachers, and little or no creativity is evident in their classrooms. On the other hand, a few teachers, because of their vibrant and secure personalities, are able to provide a creative experience for the children, concentrating on their needs and growth, and providing truly stimulating classroom situations.

At the control school a good teacher inevitably appeared to have a far more able and enthusiastic class than a poor teacher at the same grade level, although the children were carefully balanced so that the classrooms had similar populations. Approaches to teaching ranged from the most sophisticated questioning and encouragement of child growth to the "ram it down their throats" variety. In some instances, an excellent teacher may exert a good influence over another teacher, encouraging the latter to develop a meaningful program with relevant materials and techniques. But the possibility of such influence is the exception rather than the rule.

b. Tendency to be Teacher-Centered.

In a self-contained classroom situation where the teacher is almost completely autonomous there is a tendency for schooling to become teacher-centered rather than child-centered. When each teacher develops his own program without any guidelines or aid from outside sources there is nothing to prevent him from catering to his own needs rather than the needs of the children. The teacher often seems to view his class as children who are at his disposal for a certain number of hours. Children are not individuals with individual needs but rather members of "my class." In this situation the program can become what might be most convenient or least aggravating for the teacher. Workbooks, drill, and regimentation are the methods favored by some. Rigid order becomes easier than creative, vital activity, and thus the traditional classroom situation may evolve regardless of the goals of the school system.

In many classrooms at the control school teachers seemed concerned with adapting the children to the program and to teacher needs rather than with molding the school program to the children. It seemed clear that in many cases the physical, emotional, and educational needs of the children were disregarded.

c. Identification with Program and with Fellow Professionals

Lack of Identification with School. The self-contained classroom situation, by isolating each teacher and his program, tends to generate little identification with the school program and with fellow professionals. Teachers are less likely to exert optimal professional effort, though they will expend that effort which is required for them to function in the individual classroom. Since each teacher usually develops his own program in the self-contained situation, his attitudes tend to have little influence on the school as a whole, but rather affect only what occurs in his classroom. This observation is consistent with the statistical analysis of the teacher attitude scale in Chapter 8, which indicates that there were no significant differences between the attitudes of the teachers at the two schools and that attitudes remained stable over the year. Similarity in attitudes does not necessarily imply similar identification with the program and a similar willingness to put in the necessary time and effort. It is apparent that the teachers at the two schools were reacting to two different situations: at the graded school the attitudes were a reflection of the teachers' feelings about their own teaching situations in their own classrooms, tied in with their feelings of confidence and sense of professional commitment. In the continuous progress school, it was observed that those attitudes were tied not only to the teacher's feeling about his personal performance and his classroom situation, but also to his feelings about the program as a whole. Though attitudes seemed to be equivalent in the two groups, it was noted that the teachers at the experimental school seemed to be putting in a great deal more time and effort into their program than those at the control school. This is illustrated by the frequent planning meetings at the experimental school after school hours.

Generally, in a graded school there tends to be a lack of identification with the school as a whole and thus a lack of willingness to exert great effort into improving the school program. Instead, each teacher goes about his own business planning for his activities of the day with little concern about what other teachers are doing or the direction in which the school is heading. In such an environment most teachers do not seem to be really involved in the school. At the control school they seldom talked about professional matters in the lunchroom or during free time, had infrequent conferences with parents, and usually left immediately after the end of the school day. In contrast, in the continuous progress program teachers could be found in the building for at least a half or full hour after school every day planning for programs or conferring with parents. This difference is probably a function of the environment in which the teachers were working.

The attitude of a teacher in a self-contained classroom situation toward the school and the leadership appears to be independent of the quality of the teacher. The most important factor seems to be whether the teacher feels that the role of the principal and administration is positive or negative. Teachers who are frustrated or overwhelmed in the self-contained situation do not feel that there is a supportive community of fellow professionals to help them over the difficulties that may arise. There is little sense of a team effort. The teachers as a group and the principal do not exchange support, encouragement, or aid which might help teachers with personal difficulties or teaching problems to grow in positive ways. Instead, many teachers seem apprehensive about any "intrusion" into the classroom--the principal and specialists are seen as judges, not as supporters. Given such circumstances the good teachers may continue to be good, but the poor ones falter.

C. The Experimental School

One problem which confronts this evaluation is the question of whether the results of the experimental program can be attributed to the program itself, or to the fact that the program was an exciting innovation. This question cannot be answered in a study which is concerned only with the first year of the development of the program. Ideally, a study would be designed to examine the program at regular intervals for a longer period of time to determine its staying power and the roots of its success, measured in terms of the impact it has on the students. Since this study is not of that type one must settle for conjecture. The fact that this was an innovative program probably contributed to the enthusiasm and atmosphere of change which it generated. At the same time it was apparent that the structure of the program also contributed to this kind of atmosphere. In the long run, it is doubtful that the pace of teacher involvement and activity during the first year could be maintained, yet it is quite likely that this involvement and activity would still be greater than what one might find in a conventionally structured school situation.

1. Structure of School/Leadership and Expertise

As was pointed out in Chapter 3, the continuous progress program is a unique educational program, with many innovative features. One of the more exciting aspects of the experimental program was its effort to provide for teacher and program, as well as pupil, growth. Thus "continuous progress" implies the growth of children, teachers, and program, not just of the children themselves.

a. Building a Program and Improving the Quality of Instruction.

The experimental program began within a framework which had been carefully defined and developed by highly competent individuals with considerable experience with children and the public schools--namely, the principal and advisers. By the time the program was actually implemented in a living school situation plans had been developed, with the planners recognizing that adjustments would have to be made in the face of problems which would arise but could not be anticipated. During the preceding year the teachers attended special in-service sessions at which the program was presented and discussed, and during which time the teachers began to familiarize themselves with the concept of continuous progress. Following this preparation, the program was implemented at the beginning of the school year, although certain compromises were necessary, such as not pushing teachers to set up full-fledged planning sessions at first. During the first few months, the teachers and program leadership (principal and reading advisers) were feeling their way with the program and its potentials. As a result, there was vagueness in some areas. The program crystallized progressively during the year, so that it moved from its uncertain first steps to a more solid foundation within the nine-month school term. Of course, no program can ever attain its ideal, and the experimetal school at the end of the year was still striving to cope with many problems. However, the structure of the continuous progress program had been established and provided a framework within which the staff could work and grow.

Preparations for the mathematics program were less comprehensive than those for the program as a whole. The mathematics specialist, working with a committee of teachers from the experimental school, set up the criteria for the mathematics levels. These levels were geared to a mathematics text with a nongraded guide and lists of skills. The mathematics specialist conducted several in-service meetings, although, for a variety of reasons, he had little time for observations in the classroom and the kind of day to day participation of the reading specialists.

The structure of the school and the way in which leadership and expertise were utilized facilitated the building of a program and the improvement of the quality of instruction. The utilization of experts, the weekly planning sessions, and the emphasis on professional cooperation and support maximized the possibilities for teacher education, the dissemination of concepts and information, and the evaluation of the program. This constant education and feedback gave teachers the security of certain goals to strive for and the means for measuring their progress. Peer group cohesiveness and support from the formal leadership gave teachers a firm foundation for growth.

Teacher Education, Dissemination of Information, and Program Evaluation are Maximized. In a situation such as that of the experimental school (with weekly teacher planning sessions, a tradition of professional interaction, strong and committed leadership, and optimal utilization of experts), the education of teachers, the dissemination of information and concepts, and the evaluation of a new program are greatly facilitated. The weekly planning sessions, attended by the principal, reading advisers, and all the teachers of a division, allowed for the exchange of a great deal of information on everything from the newest concepts in education or child development to possible teaching aides and resources. Making decisions about the direction of the division was an important part of the process by which the program was constantly evaluated by teachers and leadership, and by which it could be modified and improved on a weekly basis. The constant professional exchange among teachers overflowed into the lunchroom and halls. There was continuous dialogue about the program and about individual children. Almost every day the lunchroom was filled with discussion relevant to the program. Although some of this verbalization was negative and complaining, much of it was constructive interchange.

The reading advisers constituted another vital channel for the dissemination of concepts and techniques in the experimental school. They generally functioned as consultants in language arts under three conditions: the consultant always assisted when a teacher requested help; the consultant would suggest that he might help when he saw that a teacher was having problems; and the consultant worked with individual children at any time. Many teachers during the course of the year asked for assistance in developing language arts units and in making their classroom instruction consistent with the needs of the children. Teachers frequently met with reading advisers during lunch or free periods.

During the school year the program leadership held a number of Saturday workshops designed to help the teachers develop new teaching techniques and approaches. Most teachers found these extremely helpful and worthwhile. For example, in one workshop the teachers were shown how to develop learning centers where children could work without the aid of a teacher on well-defined tasks, even testing their own progress without the constant supervision of the teacher. As a result of this in-service session, learning centers sprang up in classrooms all over the school, centers appropriate to the levels at which the children were working.

Aside from serving to disseminate concepts and information the reading advisers also worked persistently throughout the year to help individual teachers overcome personal difficulties which interfered with their teaching. They encouraged certain teachers to relax and feel more secure in the classroom; they urged others to learn to follow through with ideas rather than leaving projects handing. Wherever they were welcome in the classroom they attempted to help teachers to reach their full potential. Of course, there were some classrooms in which the consulants and the principal were viewed as intruders, and at times they did intrude. In a few cases where teachers had very severe problems, and offered no cooperation, the program leadership tended to intervene for the sake of the children.

Through the planning sessions, the constant professional exchange, and the participation of the program leadership, evaluation of the program and its effectiveness became a daily process. Teachers were constantly examining the program, their own teaching methods and techniques, and their relationships with and perceptions of individual children. Since many teachers worked with the same children this provided an excellent opportunity to evaluate and compare child behavior with other teachers and thus develop a far deeper understanding of individual students and the process of education.

Self-righteous self-satisfaction was not in evidence in this program. Everyone realized that there were many problems that had to be solved, and there was a constant effort on the part of the program leadership and the staff to cope with them. Thus, a constant critical attitude toward the program was encouraged, as long as it contributed to implementation of the goals of the program.

Fosters Supportiveness and Security Among Staff. A program with articulate goals, extensive professional interaction, and the support of experts and leadership tends to foster an atmosphere of security and support for most staff members. Because of well-defined goals the teachers are secure in knowing what they are seeking to accomplish and where they stand in terms of these goals. The support of the leadership and help from experts gives teachers the assurance that they can depend on backing in difficult situations and can receive professional help from outside the classroom when it is needed. The intensive interaction among teachers contributes to a strong peer group cohesiveness which gives the teacher needed support, although this support may be in a direction contrary to the goals of the program, as will be pointed out later in this chapter.

The teachers at the experimental school seemed more at ease with the observer than those at the control school, reflecting in part the security which this type of program fosters. In the classroom these teachers appeared to have a far better grasp of what they were trying to accomplish and how they were going to meet their goals and thus they seemed more confident than many at the control school. The majority of teachers demonstrated direction and purpose in their activities, and this purposefulness increased over the course of the year.

The structure of the division, the weekly division planning session, and other professional interactions led to a supportiveness among teachers, so that a certain esprit de corps developed among them, an identification with common problems and goals. This group support was not always based on a positive identification with the program as articulated by the leadership. In the case of the primary division the feeling of support and group cohesiveness proved to be a valuable asset for the program. On the other hand, in the intermediate division the supportiveness which developed among the teachers tended to work against the optimal implementation of the problem by giving peer support and reinforcement to teacher goals and behavior which were contrary to the goals of the program as expressed by the program leadership.

Encourages Constant Improvement of Program. One of the more striking differences between the experimental and control schools was the degree of program improvement shown during the year. The program in most classrooms at the control school changed little between observation periods; it was easy to predict what might be found each time the school was visited.

In comparison, the experimental school evolved noticeably during the year: during the first observation period the program was really a skeleton on which teachers were beginning to add flesh. In most classrooms there was an absence of the negative kinds of teacher-pupil interaction (hostility, etc.) that occurred at the graded school. The lack of positive alternatives was indicative of the newness of the program and the uncertainty of the teacher in it. Inefficient use of time and poor planning were also evident in certain classrooms: the teachers had not yet learned to pace themselves in terms of the new routine. Emphasis in planning sessions, therefore, was on developing guidelines for the directions in which the staff should be moving.

One teacher admitted that he had been quite tense the first few weeks of the program because this method of teaching was entirely new to him, but he decided to follow the suggestions of the reading advisers, who encouraged him to develop new educational approaches. Within a month he was comfortable and relaxed--enthusiastic about the whole program.

Few teachers were willing to place complete trust in the reading advisers, and thus each teacher initially accepted the program to differing degrees. The extent to which the program was assimilated and implemented during the course of the year depended upon the acceptance and the abilities of the individual teacher.

However, the program improved dramatically during the year. By the second and third observation periods the program had become far more solid: most teachers exuded a certain confidence and competence in handling the program and in reaching toward its goals. The program was far more than a skeleton: in many classrooms, especially in the primary division, it was living and vibrant. Positive approaches to teaching were evident everywhere, and the timing and pacing of activities had improved considerably. Most classes appeared to move smoothly, to be well integrated and balanced. At this point many teachers seemed to feel quite comfortable with this kind of pacing, though some were concerned with the deficiencies in the program. They seemed to have their techniques down pat, and to be secure in the criteria which they had developed for determining their success. Generally, it appeared that the average and better than average teachers improved dramatically during the course of the year, while the other teachers did not change, learning little from the program regardless of their support of it.

b. The Problem of Leadership: A Question of Group Dynamics.

As noted previously, the program leadership provided a solid foundation for the development of the program through its strong sense of direction and purpose, its unswerving commitment to the experimental program, and its efforts to disseminate information to the teaching staff and to constantly evaluate and improve the program. However, coexistent with this excellent foundation, the conflict between the program leadership and informal leadership was one of the most serious problems encountered during the year.

The question of the allocation of authority and expertise in the experimental school became a complex and difficult problem as the year progressed. Aside from the unquestioned, though occasionally resented, authority of the principal, the reading advisers functioned in two capacities: as experts with technically a staff relationship with the teachers, and as part of the leadership in the program. In the midst of the conflict experienced by the principal and specialists in trying to insure that the program was operationalized while fostering a democratic atmosphere, informal teacher leaders emerged, some facilitating and some inhibiting the development of the program.

The need for structure in any experimental program is self-evident. Any innovative program by nature has certain goals and certain guidelines for implementing these goals which must be followed if the project is to succeed. The dilemma for the principal and reading advisers was very clear: all were committed to the program and were determined to implement it with as little compromise as possible. At the same time all were interested in seeing teacher growth and participation in the decision-making process. Yet, as the principal commented, there would be no program if he did not exert leadership and insist on certain fundamental aspects of the program. Thus, the program leadership was constantly walking a tightrope between the two goals.

At the same time, those teachers who were dissatisfied had a legitimate grievance, given the structure of the school. They had come to expect that they would have an important role in determining the direction of the school, but some found that they were in frequent conflict with the program leadership concerning goals and means. For many teachers there seemed to be an approach/avoidance conflict with the program leadership: on one hand they wished to be left alone to make decisions, on the other hand they wanted to be told how to implement the program. This, of course, only increased the complexity of the problem.

In the normal process of group interaction informal leaders automatically emerge in most situations; and this occurred in the experimental program. Informal patterns of teacher leadership became of pivotal importance to the operation of the program. Since there was no difference in teacher rank based on competence, as there would be in the case of a differentiated staffing pattern (see Allen and Wagschal, 1968; Essex, 1967), any teacher with dominant qualities could become the focal point for the crystallization of opinions and actions, regardless of competence.

The differences in the observed success of program and implementation in the two divisions were due to differences in group interaction. The program leadership readily admitted that their major problem was a question of group dynamics. In the primary division, the informal leadership which developed was in complete agreement with the program leadership and had an excellent grasp of the goals of the program. The strong, positive informal leadership carried along less enthusiastic teachers and group pressures kept most within the framework of the program. In the intermediate division, where informal leadership developed which was in conflict with the program leadership and lacked a thorough understanding of the program and its goals, the opposite occurred. The negative influence of the leadership carried the teachers in a direction which inhibited optimal program implementation.

2. Teacher Quality/Attitudes About a Program

a. The Teacher is One of Many Variables.

In contrast to the self-contained situation, where the teacher is frequently *the* independent variable affecting the quality of education, in a continuous progress program the teacher becomes one of many important variables contributing to the educational process. The structure of the program and the quality of leadership are so vital in such a situation that the teacher variable is interdependent with them. Thus, though teacher personality and competence contributed a great deal to individual teaching style and to the implementation of the program, teacher personality was a far less salient variable than at the control school. The quality of teachers at the experimental school varied considerably, as at the control school, and yet the program seemed to affect most teachers in the school, even those who were not truly enthusiastic and/or competent. (Interestingly, it was observed that there was little relationship between teacher quality and acceptance of the program, though there was a slight tendency for the better teachers to be for it and the poorer ones to be against it.)

Of course, teacher attitudes about the program also affected the degree to which teacher quality became an important variable in the classroom. The personalities of teachers seemed more predominant in those classes which were still oriented toward the self-contained situation.

A distinction must be drawn between the program's contribution to the average and better than average teachers, and its contribution to those teachers who were less competent. In the case of the average or better group the program provided a springboard, a framework in which the teacher could develop greater competence, insight, and skill. It is noteworthy that most of the teachers in the experimental school in both divisions developed far more coherent and meaningful programs than those at the graded school, despite the problems discussed previously. Several teachers with less aptitude who accepted the program were at least getting some kind of structure, some kind of curriculum and teaching strategy into their classes, although their individual teaching styles and relationships with the children were still deficient. Some teachers who were unable to judge the abilities of the children, and/or how to pace the instructional program, seemed to be able to handle many things within the program which would undoubtedly have been devastating without these guidelines and the encouragement of the rest of the staff. A few teachers purposely isolated themselves from the reading advisers, and, of these, the teachers who were less competent evidenced few signs of growth during the year.

b. Child-Centeredness Replaces Teacher-Centeredness

In a situation where teacher needs are met through support from the leadership and the peer group and where the staff goal is a child-centered program, child-centeredness is likely to replace the teacher-oriented approach in the classroom. Child-centeredness did indeed emerge as a central element in the program at the experimental school, and is discussed in Chapter 7.

c. Identification with the Program and with Fellow Professionals Fosters Group Spirit and Supportiveness.

As was pointed out earlier, the continuous progress program tended to foster group supportiveness among the staff because of its organization of divisions with group planning sessions. From this group spirit a number of teachers appeared to derive a sense of security and belonging which helped them to feel more confident in the classroom. Group supportiveness can be either beneficial or detrimental to the program, depending on the attitudes of the informal leadership. The critical problem for the program leadership was that of fostering group identification which supported the program and successfully detoxifying group identifications which hindered the program.

Fosters Identification with the Program. Paradoxically, despite the program-supporting attitudes of teachers in the primary division and the program-hindering attitudes of teachers in the intermediate division, both groups seemed to identify highly with the program. Most teachers in both divisions were willing to give it a chance, to try to work it out. This apparent contradiction was due to the fact that the teachers in the intermediate division supported the program as they interpreted it, and, since many of them did not fully understand the program and were thus more skeptical of it, they identified with their own version, which was a hybrid of the experimental program and a self-contained situation. The conflict between the intermediate teachers and the program leadership thus stemmed in part from differences in definition of what the experimental program should be.

Teachers of both divisions were very involved in the program, which was evident in the amount of professional exchange and in the extra work that many teachers put into the year. Teachers were constantly, spontaneously talking about the program, the materials, and the children during lunch and in the halls. It was extremely difficult to schedule time to talk with the teachers at the experimental school during the day. They were always busy, frequently meeting with each other during lunch or free time, and having parent conferences or planning sessions after school.

It has previously been noted that teacher identification with the school program is not necessarily measured by the teacher attitude scale. Given the complexity of teacher attitudes, as they were affected by teachers' feelings of competence, teacher attitudes about teaching, and teacher interactions with the two programs and the two program leaderships, it is understandable that the attitude questionnaire might show no observable differences between teachers in the control and experimental schools and that these attitudes would remain stable over the year. The attitudes of teachers in the two schools were affected by differences in the influence exerted by the two school programs--the vigorous influence (either positive or negative) of the experimental school and the passive influence (either positive or negative, depending on the teacher) of the control school. Another factor to consider is that the experimental program during the first year was a somewhat tumultuous experience for some teachers, and thus it is difficult to ascertain the impact the program will have on teacher attitudes as it stabilizes. Teachers in transition certainly would have attitudes different from those of teachers in a stabilized program.

It is interesting to note that there was a slight trend toward more positive responses from the experimental school staff at the end of the year (adaptability to needs of teachers, degree of challenge, and closer to the ideal were rated higher). This might indicate that general feelings about the program began to improve slightly as the program progressed. Further study would be necessary to determine the long-term effect of the continuous progress program on teacher attitudes.

d. The Problem of Teacher Adjustment.

The problem of teacher adjustment was another obstacle to the successful implementation of the program, and contributed to the problems of program leadership. Since all teachers had come from a self-contained classroom situation, switching to the continuous progress program was a major adjustment for everyone. Some teachers adjusted quickly; others were never able to adapt successfully. Certain teachers had difficulty accepting the idea of education centered around the learning process of children, and they could not perceive how the "fundamentals" fit into this framework of learning. They felt that the children were not getting enough of the basics, enough of the concepts in science, spelling, grammar, and mathematics. For some of these teachers, the problem was that they were still bogged down in the notion of content rather than primarily concerned with the process of learning. Other teachers had difficulty *fitting* everything which they felt was essential into their classes because they could not adjust adequately to the flow of the day.

The tenacity of the self-contained concept was coped with by the reading advisers and principal all year with varying success, depending on individual teachers. Even at the end of the year a number of teachers expressed the feeling that they thought they could accomplish more in the self-contained situation, that things were too fragmented and rushed in the continuous progress program. This is interesting in light of the observations of the graded school, which indicated that the self-contained situation promoted far more fragmentation, rigidity, and non-child centered learning than the continuous progress program.

The program leadership faced another dilemma in the problem of teacher readiness. Again, it was walking a tightrope. In an effort to stimulate teachers to grow and develop it was necessary to challenge them to move beyond their present levels of development; at the same time, it was necessary to keep that challenge within the limits of what the teachers could actually accomplish, lest they be overwhelmed and regress rather than progress. The program leadership was extremely competent in assessing the readiness of each teacher and was able to challenge the teachers to grow without overtaxing them. However, there were several instances during the year where teachers became trapped in situations they could not handle. In most cases, especially in the intermediate division, this was due to problems of interaction between teachers and program leadership. Because of the newness of the program and the fact that criteria for instructional programs had not been fully developed, some teachers at times appeared to be uncomfortable in the teaching situation.

Almost all teachers at the experimental school indicated that they had never worked harder in their lives. Some added that it was so exciting and stimulating to work with the program that they did not mind at all, but others commented that the program demanded far more of teachers than should be expected of them. In the first year of such a project it is inevitable that teachers would have to discard their plans and strategies from previous years and start from scratch. However, very few teachers felt that the program was set up too quickly and that it should have been started more gradually. Most accepted the immediate implementation of the entire program at the beginning of the first year.

There can be no question that many of these teachers were working to their utmost limits, and it is a credit to the program that it was able to generate such effort from so many staff members, even from some of those who obstructed the program in certain ways. Some of the teachers found the program to be one of the most exhilarating experiences that they had ever had. Others, however, did not find these long, hard hours rewarding, either for personal reasons or for reasons inherent in the leadership conflicts and adjustment problems which emerged.

D. Conclusion

It is clear that there were significant differences in the structures and staffs of the two schools. The graded school, which is fairly typical of the average self-contained, graded school situation, was structured in such a way as to make it difficult to build a strong educational program or to improve that program through teacher education, dissemination of information, and evaluation. Instead, the structure and staffing pattern, like those of most self-contained school situations, tended to encourage each teacher to be an isolated unit, operating in a classroom with total control over children and curriculum.

In such a self-contained situation, where teachers had sole responsibility for the children in their classrooms, they were apt to be defensive about outside interference, and to block any efforts to improve the program or their competence. Thus the teacher became the independent variable in the quality of education which each child received. The child with an excellent teacher experienced an excellent educational program geared to the child's needs, and the child with a poor teacher was doomed for an entire year to at best an uninspiring school program, and at worst a negative, anti-learning experience. In the self-contained situation it is easy for a teacher to become more concerned with fulfulling his own needs than the needs of the children, because he has little support or stimulation from the outside. He also tends to lack identification with the school and with his fellow professionals, although he may have very positive attitudes about teaching and education, which are a reflection of his feelings about his own competence and teaching situation, not of the school situation.

All in all, the self-contained graded situation inherently includes certain barriers to the development of a superior educational program. It is possible that with particularly inspired and vigorous leadership, an excellent program could evolve in the self-contained situation (as, for example, has occurred in the Leichestershire schools in England [Central Advisory Council for Education, 1967]). Since the quality of leadership required to implement such changes is probably beyond the scope of the vast majority of the public schools, some other form of structure and staffing pattern is essential if we are to bring quality education to the public schools. Such a structure and staffing pattern require the elimination of the barriers to the development of a vigorous, constantly evolving, child-centered educational program.

With strong, positive leadership and the constant utilization of experts, the continuous progress program moved dynamically and certainly toward its goals. The experimental program and staff were structured in ways that improved the opportunity for professional and educational growth. Weekly planning sessions, constant professional interaction among staff, and a continuing effort to evaluate, improve, and evolve contributed to increased teacher education, dissemination of information, and improvement of the program. This constant professional interchange among staff encouraged a security and supportiveness which helped many teachers grow.

In the experimental school, where children changed classes and teachers several times during the day, and where the teachers were constantly growing and developing through professional interaction, the teacher became less crucial as a variable in the educational experience of the child. Child-centeredness replaced teacher-centeredness in many classrooms, and teachers were helped to grow and develop in positive ways. The professional interchange fostered group spirit and supportiveness among teachers which helped to carry them through the many crises which teachers face, and to develop a strong identification with the program which in many cases enabled them to help implement it.

Several problems developed during the year which inhibited the growth and development of the continuous progress program to a certain degree. They involved the questions of leadership, group dynamics, and teacher adjustment. The program leadership was caught between attempting to ensure that the program evolved in terms of its goals, and encouraging teachers to be involved in the process of evolution. The conflict occurred where teachers' goals or interpretations of the program were antithetical to the actual goals or thrust of the program. When this occurred the leadership found it necessary to exert its authority to insure that the program was not jeopardized. In this situation informal teacher leaders emerged. In the case of the primary division these teachers exerted a positive influence; in the case of the intermediate division the informal leadership tended to thwart full development of the program. Thus group dynamics became a crucial variable in the relationship between teachers and leadership.

Teacher adjustment was another problem. There were teachers who simply could not adjust to the demands of the program. Some yearned for a self-contained situation which was more secure and certain, and others felt overworked, although this in itself was not a serious problem. Many teachers found that the stimulation of the program more than compensated for this feeling of overwork, but some others, especially those in conflict with the program leadership, found that the work was not rewarding.

Overall, the structure and staffing pattern of the continuous progress school seemed to be superior to those of the graded school in providing opportunities for the development of a superior educational program. Although there were problems with leadership and with teacher adjustment, the experimental program developed into a quality educational endeavor, as will be pointed out in a succeeding chapter. Possibly the use of a differentiated staffing pattern, such as that suggested by Essex (1967) and

Allen and Wagschal (1968), would be helpful in eliminating some of the problems of the evolution of informal leadership and in improving teacher adjustment to the program.

CHAPTER 5

THE IDEAL EDUCATIONAL PROGRAM

In order to examine the quality of education in the experimental and control schools it seems wisest to measure them against a standard, an ideal set of goals for education. Each school is certain to have its strengths and weaknesses, and these are best examined in the light of particular standards of excellence.

The task of the schools, as expressed in a statement on national policy by the Committee for Economic Development (1968), is "to equip their students to face life's problems intelligently and effectively." The end result of competent instruction should be not only a desire and respect for knowledge but also possession of the skills essential to getting and using knowledge. Knowledge and reason, and their related skills, must always lie at the center of the goals of instruction, but these goals refer also to the affective or emotional life of the individual and to his capacity for decision and action. The schools should be concerned with the relevance of reason and knowledge to personal and social values; they should enlarge the individual's social perspectives, sharpen his moral and artistic sensibilities, strengthen his sense of responsibility and commitment to purpose, and cultivate creative talent.

According to the committee, ". . . a school does not fully succeed unless it makes learning an interesting if not exciting experience; unless it effectively generates intellectual curiosity, a love of knowledge, and an open mind; unless it encourages genuine incentive to create and the ability to think clearly; and unless it magnifies the self, establishes personal identity, and encourages individuality."

A. The Goals of Education

A more concrete yardstick on which to base school evaluation has been articulated by the Committee on Quality Education of the Pennsylvania State Board of Education, which formulated its criteria for quality education based on a study conducted by the Educational Testing Service (1965). Since the experimental and control schools considered in this report operate within the Commonwealth of Pennsylvania, it is logical to accept the state board's formulation of the goals of education as the ideal toward which both schools should be working.

I. Quality education should help every child acquire the greatest possible understanding of himself and an appreciation of his worthiness as a member of society.

II. Quality education should help every child acquire understanding and appreciation of persons belonging to social, cultural, and ethnic groups different from his own.

III. Quality education should help every child acquire to the fullest extent possible for him mastery of the basic skills in the use of words and numbers.

IV. Quality education should help every child acquire a positive attitude toward school and toward the learning process.

V. Quality education should help every child acquire the habits and attitudes associated with responsible citizenship.

VI. Quality education should help every child acquire good health habits and an understanding of the conditions necessary for the maintenance of physical and emotional well-being.

VII. Quality education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

VIII. Quality education should help every child understand the opportunities open to him for preparing himself for a productive life and should enable him to take full advantage of these opportunities.

IX. Quality education should help every child to understand and appreciate as much as he can of human achievement in the natural sciences, the social sciences, the humanities, and the arts.

X. Quality education should help every child to prepare for a world of rapid change and unforeseeable demands in which continuing education throughout his adult life should be a normal expectation.

The experimental and control schools will be examined in light of these ten goals formulated by the Pennsylvania Committee on Quality Education. To facilitate analysis these ten goals can be placed into three basic categories:

a. Intellectual Development: Cognitive Development and Creativity; Love of Learning. This includes the mastery of basic language and computational skills (III), positive attitudes toward school and learning (IV), and the opportunity to be creative (VII).

b. Personal Development: Self-Awareness and Acceptance, and the Ability to Realize One's Potential. This includes self-understanding and a sense of worth (I), good physical and mental health habits (VI), understanding and utilization of opportunities (VIII), and preparation for a changing world and continuing education (X).

c. Social Development: Social Awareness, Concern, and Action. This category includes appreciation of human differences (II), responsible citizenship (V), and appreciation of human achievements (IX).

B. Intellectual Development: Cognitive Development and Creativity; Love of Learning

The mastery of basic skills, the opportunity to be creative, and the fostering of positive attitudes toward school and learning are closely related facets of the optimal learning situation for a child. In reality these three aspects of intellectual growth cannot be separated, for they are interdependent. A child who does not love learning cannot develop optimally in the realm of basic skills, nor can he become a creative individual. By the same token, a child who is frustrated in his effort to learn even the most basic skills certainly will not experience joy in learning, and will never develop his creativity to maximum levels.

Growth in these three areas is contingent upon the successful progression through the unalterable developmental sequences of human cognitive growth which have been studied and articulated by Piaget (1952, 1955, 1967; Flavell, 1963) and in a somewhat different conceptualization by Bruner et al. (1966). For schools to capitalize on this growth process, and to ensure that the child has a grasp of the earliest skills at optimum levels before advancing to more complex levels (so that he does not develop learning difficulties), requires that educational programs mirror the process of growth rather than adult misconceptions of this process which are frequently content oriented.

Despite the fact that children absorb vast amounts of information and concepts in fragmented forms through the mass media and life experiences, psychologists such as Bruner (1960) indicate that reasoning and logic develop through the interrelating of these fragments, a process which can best be accomplished by formal schooling. This implies that the school situation should not mirror the fragmentation and diffusion of mass media and life experiences, but rather should foster the integration of these experiences into a system of organization and comprehension by providing a coherent curriculum which can interrelate all of the various aspects of human skills and experience into a meaningful whole.

The natural drive of the child to stimulate himself mentally and physically has been documented by several individuals (Berlyne, 1960; Maw, 1967). It causes the child to move beyond the stasis of the moment to new stimulation and interest. This drive, combined with the human drive for mastery (Erikson, 1950 and 1968), which is evident all during life but which is especially strong in the growing years, brings children to school for the first time with joy and an eagerness to learn, to be stimulated, and to master the environment which is never matched in later life. If a school capitalizes on this, the child should never diminish his joy and exhilaration, will never find school boring, dull, exasperating, and defeating. He should learn the basic skills without difficulty, should manifest creativity in several ways--and should enjoy school and learning. Unfortunately this is seldom the case.

Regimentation, order, and routine are antithetical to the development of creative thought, a love of learning, and thus to the mastery of basic skills. Creativity requires a discipline of mind which cannot be imposed from the outside; it demands a unique organization of ideas or material by a human being which can only develop when that person has the opportunity to explore many different and individualistic modes of thought and action. External rigidity never fosters creativity, but rather leads the individual to substitute external values and approaches for individual thought and action.

When the school situation is basically oriented to an adult conception of what children should learn, when teachers do not pick up the clues of children as to the areas of interest and ability which they are ready to explore, creativity does not occur in the classroom.

A lack of positive affectivity on the part of the teacher, the absence of understanding and concern, cannot help but inhibit cognitive growth and enjoyment of school. Teachers who are lacking in this warmth are apt to become exasperated and frustrated with children and to exert minimal effort.

Maslow (1943) and others have shown that anxiety can decrease learning greatly by interfering with the learning responses of the learner and essentially debilitating him. Frustration and anxiety in the classroom cannot, do not, contribute to optimal growth. A classroom where teacher expectations are far beyond the abilities and performance levels of the children cannot help but foster harmful fears. An achievement-oriented school cannot provide an optimal learning situation for the child.

All of these difficulties are increased tenfold in the case of the disadvantaged child--whether he is intellectually, educationally, socially, or physically handicapped. In a school situation which does not provide for optimal attention to every child, such children are bound to be forgotten and neglected at best, and spurned and labeled at worst. This leads to what Deutsch (1963) calls the cumulative deficit phenomena--the process by which the disadvantaged child's educational handicap increases steadily each year when compared to the educational growth of other children. Thus, in fifth grade the disadvantaged child is much farther behind in school than he was in first grade and it is impossible for him to reach his true potential.

On the other hand, the middle-class child, unlike the deprived child, learns to "play the game," to get through the system (Nordstrom, et al., 1967) to adapt to the school situation by outward compliance. This kind of response is also not conducive to the development of creativity and initiative and to the achievement of one's potential.

C. Personal Development: Self-Awareness and Acceptance, and the Ability to Realize One's Potential

Maslow (1943) is one who has pointed out the hierarchy of needs in the human being, a hierarchy in which the lower needs must be met before the individual can begin to feel the higher needs "to know and to understand" and the "aesthetic needs." Thus the schools are in a position where it is necessary to satisfy the most basic human needs for body comfort, affection, and security before children can begin to be aware of the higher intellectual needs which it is the schools' ultimate purpose to attend to. All of these needs must be satisfied if the child is to develop self-understanding and a sense of worth, and thus become a healthy, vital personality.

Therefore, the teacher must provide for the basic needs of the children by fostering an atmosphere of security, acceptance, and affection, and by providing for the physical needs of each child which can be met in the school situation. Of course, much of the need satisfaction of the child comes from areas outside the teacher's control--the home and the peer group. But the school is another significant factor which can reinforce either security and confidence or uncertainty and fear. Teacher attitudes toward children have a great deal to do with the classroom atmosphere and with the ultimate learning of the child.

Aside from the satisfaction of needs, psychologists have long pointed out that growth depends upon the ability to make choices, to examine the environment, and to decide on a course of action, carry it through, and evaluate the results. Most learning is by trial and error--by doing. Very little that is truly significant is learned in other ways, especially in the early years before children develop higher mental skills (Brunner, 1966; Piaget, 1967). A school which is so structured that children are not able to make choices--choices about personal and educational matters--cannot contribute to personality development. In a school characterized by rigidity and routine it is highly unlikely that children will learn self-reliance, confidence, understanding, and a sense of worth--and thus unlikely that they will be able to realize their potentials in this situation.

The problem is aggravated for the disadvantaged child, who often falls victim to subtle discrimination and neglect in the classroom. Middle-class children, coming from homes which frequently provide them with an academic orientation and with personal support in school, are infrequently the objects of such negativism. But the disadvantaged child faces severe handicaps in most schools because of the preconceptions of teachers which prevent him from developing his personality to the fullest in the school situation (Passow, 1963).

D. Social Development: Social Awareness, Concern, and Action

Much of what children learn is social, based upon their perception of the attitudes and actions of the "significant others" in their lives (Sullivan, 1948). These significant others include parents, siblings, relatives, peers, and teachers. Most of the basic philosophical, moral, and social concerns of the child are formed with reference to these significant others. Generally the child adopts the social attitudes, prejudices, and concerns of those around him, as the tenacity of prejudice and bigotry indicates. A child surrounded by adults who lack appreciation of human differences and human achievements, who are irresponsible citizens of this planet, is unlikely to become a concerned, aware, and responsible person eager to improve the world around him.

The teacher, as one of the significant others in the child's life, influences the child's attitudes and beliefs. A teacher who is himself prejudiced toward certain socioeconomic, ethnic, or cultural groups cannot help but impart this to the children; a teacher who shows broad human concern and compassion for all peoples will affect the child's perception as well.

The full development of a responsible and mature personality is essential to the development of a responsible and mature citizen. Thus, children who are stifled in personal development cannot become responsible, concerned citizens. Whether a school provides children with an opportunity to make their own decisions in numerous situations is an important aspect of personal and civic development. The child who is given responsibility and an opportunity to develop independence will become a responsible, concerned, and active citizen, while the child who is regimented throughout the day is not likely to attain such qualities.

The appreciation of human achievements requires a school situation where children are constantly exposed to the enriching contributions and experiences of human life, to the achievements and potentials of the arts, sciences, and humanities. This requires a curriculum which is constantly moving in the direction of children's interests to reveal the world in all of its richness and its despair, to give children a feeling for the role of man in that world, and the meaning of human endeavor and achievement. This can happen only where the process by which children learn is taken into account and children are given the opportunity to explore the world to the fullest.

The purpose of Chapters 6 and 7 is to determine the extent to which, based on the evaluations, the graded control school and the continuous progress experimental school measure up to these ideals.

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CHAPTER 6

THE GRADED, SELF-CONTAINED CLASSROOM

In the preceding chapter the ideal educational program, as prescribed by the Pennsylvania State Board of Education in terms of goals, was described and discussed. These goals were organized into three broad categories: intellectual development, personal development, and social development.

It is the purpose of this chapter to examine the graded, self-contained classroom as an educational program to determine the extent to which such a program has the potential of realizing these ideals and goals.

A. Intellectual Development: Cognitive Development and Creativity; Love of Learning

1. Mastery of Basic Skills

a. Teacher-Centeredness Inhibits Learning

The self-contained classroom situation, by fostering teacher-centeredness, makes it difficult for children to learn optimally. If a teacher is focusing on his own needs and aspirations, he cannot possibly develop the insights needed to design a curriculum which will mirror the growth processes of children. Teachers who do not receive constant information and support in diagnosing the abilities and needs of children and in tailoring a program to these diagnoses are rarely in a position to develop a child-centered program. The sequences of learning in children studied by Bruner (1966), Piaget (1952, 1955, 1967; Flavell, 1963), and others point to the levels of cognitive development through which each child must advance sequentially. In a teacher-centered situation this sequence is inevitably distorted into an adult conception of the learning sequence, which generally resembles a cramming of facts into little heads rather than the orderly progression of cognitive development in the child.

In certain classrooms at the control school the teachers were observed to be frustrated and hostile because children could not comprehend lectures which were foreign to their level of development and interests. The children, reacting to a presentation which was not within their grasp, seemed apathetic, dull, and unresponsive. In such a situation teachers in effect punished children for their own inadequacies.

The cognitive development of the disadvantaged child suffers the most in this situation. In one instance a teacher at the control school actually complained because a mentally retarded child with perceptual difficulties had improved so much during the year that he would not be eligible for special education classes. In several classrooms one or more children were singled out as the class dunces. These children and their classmates knew that they were the "slowest ones." They were virtually ignored as unteachable and thus the cumulative deficit phenomena described earlier very likely occurred.

b. Limited Teacher Growth Results in Distorting the Learning Process

The studies of Piaget (1952, 1955, 1967), Bruner (1966), and Hebb (1949, 1955) have shown that children progress through a definite and unalterable sequence of stages of cognitive growth. In the self-contained classroom each teacher must become essentially a psychologist, studying the developmental sequences of children and then designing a program appropriate to those sequences. Without the contributions of other professionals and experts the teacher must attempt to be a classroom "renaissance man"--an expert in education, psychology, and sociology. This, of course, is almost impossible.

Without the professional interchange of concepts and approaches, many of the control school teachers were not equipped to diagnose children and prescribe appropriate programs. As a result, in many classrooms subjects and activities were fragmented so that they simply did not conform to the natural learning patterns of children. Teachers tended to become more concerned with facts and isolated skills than with the fundamental development of thought processes in the child and to turn to more superficial instructional methods.

As a result of the limited opportunities for teacher growth in the self-contained operation, fragmentation of activities, purposeless instruction, and the "workbook mentality" are likely to be prevalent in many classrooms.

Fragmentation of Instruction. The child's experiences tend to be fragmented in several ways in the self-contained situation. As he moves from grade to grade, continuity is lost in a school without a schoolwide program. At the control school, since there were no means for developing a consistent and continuous curriculum throughout the school, each teacher developed his own version of a school program; thus, there was no continuity from one grade to the next. One year a child might have an excellent learning experience, the next year a deficient one, depending on the quality of the teachers.

Fragmentation was also present in the classroom itself. Since there was no schoolwide program, each teacher had to integrate all the language and computational skills himself--a formidable job for anyone. The most creative teachers, of course, were able to develop continuous, logical progressions within their classrooms that closely paralleled child development. But the average or mediocre teacher felt that there was nowhere to turn for help or advice. Extensive exchanges on a professional level were rare with either peers or experts. Most teachers did not have an integrated daily instructional plan other than a sequence of isolated tasks which must be taught.

In many classes field trips, special films and features, and special subjects (art, music, physical education) were isolated from any concrete relationship to what children were learning from day to day. Children were simply barraged with random facts and somehow expected to integrate them into meaningful understanding.

An understanding of the process of education appeared to be entirely absent in a number of classes at the control school. These teachers concentrated on filling children with facts, information, exercises. Thus, in certain classrooms the timing of activities was gravely distorted. Activities which enthralled and enthused the children were cut off in the middle, and dull and educationally purposeless activities were continued for great lengths of time. A number of teachers at the control school claimed that the short attention span of the children required this constant change, but the observer noted that frequently the teacher cut off a project at the point when children were deeply involved in it. The teacher's compulsion to produce forced children into tiny compartments of spastic activity without any continuity.

Purposeless Activities. Curiously enough this compulsiveness led not only to cramming many activities into inappropriately short time periods, but also to wasting a great deal of time. The teacher who disregarded the natural learning process in children was unable to put any activity into proper perspective and thus many worthy activities were shortchanged, leaving the teacher with periods of time that had to be frittered away. Such teachers found it difficult to fill the day with worthwhile activities, with the result that many projects and duties were thrown randomly in as "filler." Teachers would take an inordinate amount of time to get the class moving in the morning, to get the children ready for lunch or recess, or to go home in the afternoon. In some classes, while the teacher was engaged in small group activity, the rest of the class was assigned "busy work." Independent activity was frequently purposeless activity, lacking direction because the teachers themselves had no direction. Too often a free play situation simply meant that nothing happened among the lower grades. It was a time for teachers to rest.

Workbook Mentality. It is far easier for workbooks, quizzes, and textbooks to become the predominant mode of instruction in self-contained classrooms. Materials and ideas move far less freely and it is easy for the less creative teacher to fall into the "workbook rut" when his own ideas fail him and he has nowhere else to turn. In more than half the classrooms at the control school the workbook approach was the most common teaching method. Some teachers relied so heavily upon these tools that they actually complained if they had to supplement them with their own ideas. Supplements frequently took the form of additional workbook-like exercises.

As a result of these problems continuity and the degree to which school activities approximated the growth processes of the child were directly dependent upon the teacher's vision and his ability to implement child-oriented programs. A few creative teachers developed excellent programs. The others were no more than mediocre. In the self-contained, graded situation there was no way to pool the talents of various teachers in different areas, no way to capitalize on the strengths of each individual teacher for the benefit of the entire school program. Instead, each teacher took his personal strengths and weaknesses into his own classroom; where he was strong, his instructional program was strong, and where he was weak, he struggled along as best he could.

c. Difficulty in Providing an Optimal Program for Each Child

Many sociologists, psychologists, and educators have pointed to the problem which Deutsch (1963, 1964) refers to as the cumulative deficit phenomena (see John, 1962; Passow, 1963; Loban, 1963). Basically, this label describes the phenomenon by which the educational gap between "disadvantaged" and middle-class children increases with each year that the children are in school. The graded situation, with children of tremendously disparate abilities expected to perform at some specific "grade level" of competence at the end of the year, makes an optimal program impossible. Few classroom teachers are so extraordinarily gifted that they can provide the best learning environment for each child. Without well-defined criteria for diagnosing the levels at which children are functioning, criteria which can only be developed within the framework of intensive schoolwide curriculum planning, it is impossible for all but the most skilled teachers to correctly place, and then develop an optimal instructional program for, each individual child.

In many classes at the control school individualized instruction was interpreted to mean that each child would read a different library book, and that classes were split up by ability for some subjects. In some classes at the control school it was not difficult to identify the slowest children. They suffered from labeling and general neglect and were left on their own for most of the day. Despite the claim of individualized instruction the teachers tended to teach to the upper middle of the class, leaving the slow child overwhelmed by materials he could not comprehend and the bright child bored and unchallenged.

2. Opportunity to be Creative

a. Lack of Spontaneity and Creative Activities

Creativity is easily sold short in a graded self-contained classroom situation which tends to be teacher-centered and closed to outside professional influences. In many classes at the control school, the spontaneous child was told to sit quietly; enthusiastic chatter over a learning discovery was silenced quickly. The natural physical nature of the child was suppressed. Many of the teachers were not sensitive to spontaneous clues from children about things that really interested them and which could have paved the way to meaningful learning situations. Instead these children worked interminably with workbooks and exercises. When a child enthusically approached a teacher with an idea or with something he really wanted to do he was frequently put off permanently with, "We'll do that later."

Encouraging children to create their own work in language and science, filling the room with the children's efforts, having the children take an active part in the process of evolving activities were evident to different degrees in most classrooms. But the predominant impression one gathered in the control school was not of creative growth but of regimentation and routine.

The well-ordered classroom took on a depressing pall when one noticed that there was no childlike spontaneity here, no joy in learning, no excitement, no unusually creative approaches to situations. The youngest children went resolutely about their free-play activities. There was little "messing around" but also little that looked like spontaneity and the excitement of discovery. Children in the younger groups were not constantly running up to the observer to proclaim what they had just learned or to show some exciting new discovery, as they did at the experimental school. The older children did not know how to use time--it simply elapsed. In most classes children did not show the enthusiasm and excitement over learning that was evident in many classes at the experimental school.

One was struck at the control school with the barrenness of many of the rooms: though some rooms displayed an abundance of children's work, in others there was very little. Some teachers decorated their rooms with their own drawings and decorations. Many of the rooms were totally colorless. Even children's writing and mathematics were seldom displayed, except perhaps on a corner bulletin board. In these rooms there was none of the joy, the vigor, the pride of a classroom filled with child-made objects and art work; educational gimmicks and materials substituted for displays of children's creativity. The atmosphere as a whole seemed rather sterile. There were no animals for the younger children to learn to take care of and no play areas, only "educational" toys.

b. Order and Achievement on Tests Become the Criteria for Success

Since each teacher is essentially responsible for what happens to every child in his class during the course of the year, teachers in a self-contained classroom situation are under pressure to show results for the year's work. It is easy to point out an orderly classroom, and to show numbers representing achievement on tests; but it is extremely difficult to offer evidence on the subtle growth processes taking place in children--intellectually, socially, and personally. Thus, many teachers in a self-contained situation, including many at the control school, are trapped into emphasizing high achievement on quizzes and tests, and achievement batteries, in order to show tangible results for the year's effort. Lacking other guidelines for measuring success, they also tend to see rigid control over the classroom and impeccable order as external manifestations of good teaching.

Instruction Becomes Test-Oriented. Children are constantly being taught to respond "correctly" to tests and drills rather than to develop creative problem solving. It is easy for the average teacher to fall into the trap of clinging to such false criteria of learning when there is no program of teacher education to help him understand the growth process and to develop a child-centered program.

It was evident at the control school that even the better teachers tended to have a test-oriented "set" in their approach to teaching. Thus, children were harangued daily about their performances on quizzes and in workbooks. Many teachers relied almost exclusively upon tests as a feedback for their "success" with the children. This test-oriented instruction may give children in a conventional situation an advantage in taking achievement tests which are geared to this kind of instruction; but neither the achievement tests nor test-oriented instruction tap the vital cognitive development of children. This factor might well explain a tendency for the children in the control school to have "achieved" more in a few areas (See Chapter 8).

Because of this emphasis on achievement, "failure" was common in many classrooms and resulted in negative sanctions and attitudes. Also, in a number of classes disadvantaged children were ignored completely--their comments were not accepted, their work was not noted, they received no assistance.

Tendency to Emphasize Form, Order, and Routine at the Expense of the Learning Process. Without teacher education and support for creative structure in the classroom, many teachers in a self-contained situation find it difficult to distinguish between "structure" and "discipline." Structure can be defined as the subtle process by which a teacher helps individual children (and the group) to reach their maximum personal and intellectual development. Many confuse rigid order with this structure. The self-contained classroom provides an atmosphere in which the teacher can easily slip into the traditional notion of a classroom--rigid desks, children in rows, no interchange between children, no spontaneity or movement except on the playground. As long as the teacher has absolute control of his class he feels successful. The anxieties which teachers feel regarding their responsibility for an entire class of young frolicking humans all too frequently results in regimentation intended to bring what a teacher might consider an overwhelming situation under control. For other teachers who are insecure, impatient, lacking in self-control, or feel a need for power, this regimented approach is personally satisfying as well.

In some classrooms at the control school it appeared that an incredible amount of effort and time was devoted to ordering the children. Children were lined up, organized, quieted every time there was a transition in the day--going to lunch, recess, or home, changing groupings. Teachers used different means of eliciting this order, ranging from the constant barking of commands, to using the American "virtue" of competition (e.g., "Let's see which row can quiet down first"), to threats. In many cases this regimentation included restriction of the times when children could use the rest rooms or water fountains--with exceptions granted sparingly. The teachers seemed preoccupied with order, and the ultimate solution to the "problem" child was a good paddling by the principal.

Frequently this regimentation appeared to be the arbitrary imposition of adult whims upon children in situations where the students' behavior was not affecting learning in the classroom--such as when a child was slow in preparing to leave for home in the afternoon, or when several children were talking as they lined up to go out for recess, or when students were picking up art supplies.

During the first observation period much teacher energy was spent in organizing, settling, and reprimanding the children in certain classrooms. Indeed, with all of this emphasis on order it seemed to the observer that some teachers actually made more work for themselves by insisting on unnatural kinds of discipline from the children: energy which could have been applied to teaching was diverted to this endeavor. By the middle of the year the children--for better or worse--had "settled down," had internalized this ridigity. As the year progressed and the children "shaped up," the "need" for chastizement decreased, but in the process the enthusiasm to learn and discover was also fading.

For some teachers at the control school, however, there was a certain ambivalence about the use of order and rigid silence as opposed to permitting "working noise" which is currently in vogue in many segments of the educational community. The dilemma was underscored by the fact that few teachers really understood the distinction between working noise and chaos, and few had any conception of when to demand silence and when to permit children to communicate with each other. Thus some classes seemed to alternate between regimentation and chaos, neither of which resembled creative structure.

3. Positive Attitudes Toward School and Learning

Psychologists have discovered that children naturally seek out mental and physical stimulation (Berlyne, 1960) and have a drive to master their world at ever more complex levels (Erikson, 1950, 1968). Others have pointed out that children bring far more previous knowledge and abilities to the learning situation than many adults realize (Chomsky, 1966). However, despite this natural drive and propensity to learn and to master the world, the self-contained graded school situation frequently fosters the stifling rather than the encouragement of these valuable drives. Where learning is forced to conform to adult misconceptions of what children should learn, when teachers are lacking in enthusiasm and affective response, when instruction is test oriented and order and routine predominate over learning, the natural drives to stimulation and mastery disappear from the school situation.

Teachers frequently seem to be insensitive to the interests of children and to ways of capitalizing on these interests. In one situation at the control school a teacher was teaching addition and substraction by having students "buy" items at the front of the room (erasers, chalk, books) for pennies. The enthusiasm of the children was obvious, yet it never occurred to the teacher to set up a store where the children could buy and sell on a regular basis, learning all the basic mathematics. In another class a disadvantaged youngster had a passionate love for the study of fossils and rocks. He read everything he could find on the topic and could name many varieties of prehistoric animals. Yet his interest seemed to be largely ignored by the teacher. Many teachers were not concerned with the interest of the children but only with the subjects they had to cover during the course of the year.

It is amazing how enthused young children can become about learning even with an incompetent teacher. It is also remarkable how the enthusiasm seems to decrease every year the child is in school: the first graders wave their hands and "ooh" and "ah," but as the children progress they lose this spontaneity and enthusiasm so that by the time they reach fourth grade they are subdued and disinterested in school.

The teacher-centered atmosphere also encourages a "you come to me, I won't come to you" attitude. As a result, students at the control school would not communicate their confusion or ask for help from certain teachers. Such teacher attitudes do nothing but dampen the enthusiasm of children to learn.

The natural love of learning of the child is all to frequently squelched, especially in the less able students. The observer frequently noted sanctions against less able and less motivated students which tended to reinforce their negative attitudes about school and learning, such as forcing a child to complete a "perfect" paper during a recess period.

B. Personal Development: Self-Awareness and Acceptance, and the Ability to Realize One's Potential

The necessary conditions for optimal mental and physical health include the satisfaction of needs in the hierarchy described by Maslow (1943), and the opportunity to make, implement, and evaluate choices in life. In a teacher-centered, self-contained situation it is extremely difficult to meet these conditions. Children's needs are subjugated to those of the teacher, and even the most petty detail is likely to be regimented and regulated by adults. There is no clear-cut apparatus for dealing with the special needs and difficulties of children. This problem is compounded for the disadvantaged child when the teacher subtly communicates negative feelings to him.

These problems have been discussed previously. This section will deal mainly with the importance of opportunities to make, implement, and evaluate choices in child development and with teacher prejudice against the disadvantaged child.

1. Children Seldom Make Choices

In the self-contained situation children have little opportunity to make decisions about movement and activities. Children did not move freely in the control school--they were lined up, quieted, and accompanied by the teacher wherever they went. In many classrooms students were not even given credit for being able to make such personal decisions as when to use the rest room or get a drink.

In most classrooms, children also seldom made decisions about what they were going to work on, what activities they were going to pursue. Their day was completely planned from start to finish. There was no need for a child to develop internal guidelines and the reasoning power needed for self-reliance. For example, in preparation for a field trip one of the teachers was telling the children what to do, what the rules were. There was no discussion of how to proceed, what rules would be worthwhile, no opportunity for the students to make any decisions or even suggest rules. The teacher simply said, "Your must do this, this, and this" (e.g., "You must wear slacks and a sweater"). After prodding from the children as to why, the teacher said, "The other teacher and I have decided that this is what we shall do." After more prodding he finally give the reasons (i.e., it might be a cold day). This could have been an excellent opportunity for children to learn to plan and to logically think out rules and guidelines. Instead it was an exercise in teacher authority.

The general atmosphere at the control school implied that children were not capable of making decisions, and of having internalized controls. This led to a self-fulfilling prophecy. The school was not enabling the children to develop decision-making ability and responsibility.

In order to minimize painful confrontations children adjusted to the rigid demands of the school, "settled down," as the teachers would say, and gave the appearance of being regimented and ordered themselves. Individual expression was lacking; children were nicely packaged as "good" pupils. Thus, the observer noted that little time was spent in ordering and regimenting children during the second and third observation periods as compared to the first observation period. Consequently the teachers who utilized rigid controls seemed less domineering, and more patient than during the first observation.

It was quite evident that the order that had been achieved was superficial, for as soon as the teacher left the class for a few minutes the children would erupt into "forbidden" activities. Several teachers were obviously distressed to return to their rooms and discover free-for-alls taking place in the observer's presence. (The observer did not feel that it was his role to discipline children.) In several cases the hostilities of the children toward several particularly autocratic and arbitrary teachers were manifested in mocking behind the teacher's back and, more subtly, in stories and art work.

2. Independence is not Fostered in a Teacher-Centered Situation

The self-contained situation does not foster the development of independence and individuality in children because of the tendency of teachers to exercise total control over the child's activities and to view the class as "my children." In this situation, the child is forced to rely on the teacher for every decision, every need, and thus is placed in an unnatural state of dependency at a time in his life when he is naturally growing toward independence.

Since the child does not move about the school and does not work with a variety of teachers he has few opportunities to develop self-reliance and self-control. In many cases children were lined up no matter where they went during the course of the day. Thus it was evident in many classrooms at the control school that the students were less independent and less able to control their behavior than those at the experimental school. They simply could not be left to themselves without teacher supervision.

3. Assault on the Self-Esteem of the Disadvantaged Child

A child develops his attitudes toward himself as a reflection of the feelings others have toward him. For the child to develop the healthy self-esteem necessary for the realization of his full potential, it is essential that the significant others in his life have a healthy, accepting, affectionate attitude toward him. All too frequently the disadvantaged child, who begins with an educational handicap, also acquires an emotional handicap because of the responses of significant others to him and his problems.

Since the control school was essentially a white middle-class school with a few children of foreign college students, racial bias was not evident. But two biases were very real--against the poor and the less able. Although a few of the teachers seemed to transcend biases and to give fair and equitable treatment to all children, others had negative attitudes toward disadvantaged white students in the school. The teachers' disregard for them as people was so blatant that they would even tell the observer how slow and hopeless a child was while standing right in front of his desk. Such children were stereotyped: as soon as one of them opened his mouth or made a move, the teacher would approach the observer and begin complaining about him. Such a situation was hardly conducive to the development of healthy attitudes toward oneself and an awareness of one's positive potentials.

C. Social Development: Social Awareness, Concern, and Action

1. Appreciation of Human Differences

It is very difficult for any child to develop a deep understanding and appreciation of human differences--be they social, personal, cultural, or racial--when the adults around him demonstrate strong biases against certain types of individuals. As the previous pages indicate, some teachers at the control school showed strong biases against the disadvantaged children in their classrooms, a bias which was communicated subtly but effectively to the other children in the room. The distinction between the disadvantaged and middle-class children was so obvious in many classrooms that the children themselves could not help but make it, responding to the teachers' own condenscension and frustration. Again, as with all other vital aspects of the education of the child, the teacher is the independent variable, and in certain classrooms the disadvantaged child was treated with the same affection and support as other children, a situation which served as a model for the developing moral sense of the pupils. However, this was observed to be the exception rather than the rule.

2. Responsible Citizenship

When children are in such a position that they are regimented and controlled during the entire day, they not only fail to develop their personal potential and to learn to make choices, but they fail to learn how to extend this to the role of citizen. Responsible citizenship requires a well-rounded personality, an ability to examine issues, to make choices, and to act. Also necessary are an appreciation and acceptance of those who are different and an ability to act in the public rather than personal interest. The previous pages have indicated that the observer found neither of these necessary conditions in most classrooms at the control school.

3. Appreciation of Human Achievement

Curiously enough, little attention to the great achievements of mankind was evident in the control school. One cannot get a sense of these from workbooks and texts, and some teachers used few other instructional methods. There was little opportunity in many classes to even be exposed to the great artistic, scientific, and social advances of mankind. Concepts tended to be limited to isolated skills in reading, writing, and arithmetic, complemented with a smattering of social studies and science thrown in on the side.

Very few teachers at the control school were able to develop a curriculum which explored the universe and man's relationship to it through the needs and interest of the children. In most classrooms the individual child was not enabled to develop a sense of his place in the cosmos, or to gain an understanding and appreciation of human strengths and weaknesses when projected on the broader scope of time and existence. Instead, most instruction was geared to fragments of information and isolated skill development.

D. Conclusion

In the graded school, although a few classrooms with excellent teachers developed excellent school programs, the overall quality of the instructional program did not meet the needs and motivation of the children and, in fact, provided little stimulation for the individual teacher.

In terms of cognitive and creative development and the love of learning, the self-contained graded situation served to foster teacher-centeredness and limited teacher growth because of the isolation of the teacher in the individual classroom from the influences of leadership, expertise, and fellow teachers. Thus, in many classes teachers were prone to cater to their own needs rather than the needs of children. Without provision for continuous teacher education and program development the learning process tended to become distorted. Instruction was fragmented from year to year in the graded situations--and even in the individual classroom--because teachers had not learned how to provide education which was in keeping with the natural growth sequences of children. Instead, they were content oriented, moving from one isolated skill to another. Many activities became purposeless because teachers did not understand child development and were simply trying to fill the day and fit in isolated skills. The teacher fell back on workbooks and texts as an easy way to organize materials; this was less difficult than trying to develop an educational program which was attuned to the growth processes of children.

It was very difficult to provide the optimal program for each child, for the teacher was overwhelmed in the classroom situation, had no way of diagnosing children's levels, and tended to teach to the upper middle of the class. The socially, economically, physically, or mentally disadvantaged child was either ignored or was the object of prejudice and hostility.

In such a context creativity founders. Order, form, and routine are easy to maintain, and their presence give the impression that the teacher is competent. Thus, it is easy to fall into the rut of regimentation and routine at the expense of the learning process. At the control school spontaneity and creative activities were far less important than a secure and orderly classroom. Achievement on tests and other tangible measures were the most common criteria for success because teachers were not provided with other alternatives and the means of implementing them. Thus, children were frequently taught to respond appropriately on tests; there was a lack of emphasis on creative or individualistic thought. Consequently little creative effort was observable in the classrooms.

Given these conditions, it is highly unlikely that children will develop positive attitudes about school and learning. In classrooms where order, rigidity, workbooks, and purposeless fragmented instruction filled the day many students at the control school lacked enthusiasm and showed no joy in learning.

The control school contributed little to the development of the children's self-awareness and acceptance and the ability to realize their potential. In most classrooms students seldom made choices: they were regimented and ordered throughout the day, and even use of the toilet or trips to the water fountain were strictly regulated by teachers. Thus, children responded to external controls rather than developing internal controls, maturity, and independence. Many classrooms were engulfed in chaos as soon as the teacher left the room. Independence also was not fostered in the teacher-centered situation, where pupils were forced to depend on one person for almost the entire day to make most decisions and plan all activities. They were totally dependent at a time in their lives when they were naturally trying to become more self-sufficient. Also in the self-contained situation, the child who was handicapped or disadvantaged frequently became the victim of the teacher's frustrations and isolation. Thus, in a number of classrooms at the control school, the disadvantaged child was the class dunce who was ignored or even openly disparaged. Such demonstrations of teacher prejudices were possible because teachers were not helped with "problem" children and were not reinforced for more positive attitudes about them.

The control school also contributed little to the development of social awareness, concern, and action. In the control school, where many teachers themselves scorned less able or different children, children were provided with negative models from which they could learn prejudices. Thus the appreciation of human differences was not served in this situation. Responsible citizenship cannot develop when children are constantly controlled and regimented and have few opportunities to develop maturity, independence, and self-control. Children also are not likely to learn to appreciate human achievement and their place in the world when the curriculum is fragmented and textbookish.

CHAPTER 7

THE CONTINUOUS PROGRESS PROGRAM

The purpose of this chapter is to examine the continuous progress program in terms of the ideals and goals utilized to analyze the graded school in the preceding chapter.

It should be emphasized that the experimental school was, at the time the study was conducted, in the process of becoming--it was vibrant, growing, constantly changing. Consequently it is exceedingly difficult to freeze this program in time, as compared to the ease with which this can be accomplished with the control school. The latter was static, with the exception of the classrooms of a few excellent teachers. The experimental program cannot be easily frozen and dissected, for what it should be, hoped to be, was evolving toward are integral parts of what it was. There were many imperfections. Certain classrooms were the epitome of what the program should be, but most were moving with varying degrees of success toward full implementation of the program. Even teachers in conflict with the leadership did, in many instances, assimilate at least some of the goals of the program. Several classrooms remained bastions against the inroads of the program, but they were rare.

It is impossible to draw meaningful conclusions about the ultimate worth of a program during its first year of operation. There are many extraneous variables working upon a school in transition from a traditional classroom situation to a continuous progress program, variables and strains which contaminate the results of any evaluation. The present study is geared to giving some indication of the direction in which the school was moving, and to providing some insights into the problems of transition. In order to determine the ultimate value of the program, it would be necessary to study it after it had stabilized, preferably after several years had passed, in order to determine the program's long-run impact. Within the framework of this shorter study during the transitional period of the program's development, an attempt will be made to distill the thrust of the program--what it was and what it was becoming. This chapter is concerned with this thrust, and attempts to point to the overall direction and significance of this experiment.

A. Intellectual Development: Cognitive Development and Creativity; Love of Learning

1. Mastery of Basic Skills

a. The Vital Role of Experience in Cognitive Development

Although the curriculum of the experimental school was far from perfected during the first year of the school, the staff was constantly striving toward development of an optimal curriculum for the children. The importance of an enriched environment for learning was well understood by the program leadership.

The reading advisers expressed several times to the observer the importance of a backlog of experiences and stimulation on which the child can base the development of communication skills--either verbal or computational. A child cannot begin to communicate until he has something to say, something based on his experiences--the events, objects, creatures, and people he has been exposed to. It is futile to attempt to develop elaborate communication skills when this background is limited. Thus, the advisers encouraged the teachers to emphasize the provision of experiences for the children so that they could develop the background necessary for effective and meaningful communication.

Children were continually working with their hands, especially in "special emphasis," which was viewed as a time for physical activity, for experiencing and doing rather than developing more academic skills. Students throughout the year were constantly involved in cooking, dance, dramatics, pottery, murals, building machines, making castles, and many other craft and construction experiences. For the Valentine unit one class went to the post office on a field trip and then proceeded to develop a post office in their own room. All the other rooms had mailboxes on the doors and on individual desks and appointed postmen. Each class made valentines and letters to send to other children throughout the school.

Many teachers were willing to work around physical complications to provide optimal experiences for the children. During one observation period an intermediate class was producing a play about Indians for the division and about one-third of the classroom was taken up with props, scenery, and costumes. Yet the teacher and children seemed to work around this during other parts of the day, even with the front of the room completely dominated by the stage.

Teachers displayed a great deal of creativity in developing worthwhile experiences for the children. One primary teacher doing a special emphasis on machines invented a character named Mac Hines, a caveman who invented simple machines. Each day one child put on the fur garb of the caveman and went forth with his classmates to discover a new machine. Using problems a caveman might have, such as lifting a rock, transporting water, or building a shelter, the teacher would present the problem to the class after scattering the necessary equipment on the playground (a lever of wood, a rope for a pulley arrangement, a crude wheel and axle). The students would go out to hunt for items which might help them solve the problem. After constructing and using the machine the children enthusiastically drew pictures and wrote stories about their "invention."

In the intermediate division, one focal point for experiences was a week-long retreat at the beginning of the year into a mountain recreation area where the children spent five days living, eating, and sleeping in the company of their teachers, studying nature and related crafts and activities. This experience was utilized for many weeks thereafter as a stimulus to language skills--creative writing, arts, crafts, putting experiences into written or spoken language.

The challenge of trying to provide enriching and stimulating experiences was very evident in the lower primary, where children were developing pre-reading verbal skills during the first part of the year, and then later the fundamental reading skills. Teachers and reading advisers found that lower primary children who were less verbal and came from homes which put less emphasis on verbal communications were lacking in the kind of experiential background which would permit them to develop fluidity in communicating. Throughout the year there was a problem in offering the kinds of experiences which would stimulate these children and provide a background which would facilitate the development of communication skills. Motivation is one of the crucial elements in this equation, for the child with rich experiences bubbles with excitement, with the wish to communicate, while the child with impoverished experiences has no reason to verbalize or quantify since he lacks the raw data required for such activity.

In the lower primary it was found that students performing at the lowest skill levels needed concrete experiences to hold their attention and to give them something to build language upon. Several projects were designed to stimulate the children. Both lower primary teachers developed a unit on chicks including concrete activities such as going to the hatchery for eggs, hatching chickens, examining their embryonic growth, and cooking egg dishes. Each lower primary teacher utilized the "chick" experience in different ways--the teacher with children who were beginning readers used it as a basis for language arts and the teacher with the younger children took it as the basis for a broad, integrated educational experience.

At the end of the year, in an effort to increase the stimulation of the children functioning at the lowest language arts levels, the reading advisers and the lower primary teachers met and decided to combine the two primary classes for part of each day to give the lowest language arts group the opportunity to relate to the more advanced primary class. They planned a circus as a focal point for activity at the end of the year and the children were combined every afternoon to prepare for it. Centers for reading, writing, painting, and clay and a listening center with stories and circus music were set up around the room. These were introduced one at a time and then were integrated into the centers the children were already using. There was also a rest place where children could just relax when they were fatigued. The circus was part of the gala festivities planned by the primary division for the end of the year.

Another aspect of the effort to increase the experiences of the youngest children was the gradual integration of the lower primary into the regular special emphasis program of the division. The children were introduced to this quite naturally (though it was not actually planned as an introduction) by a "dinosaur clinic" which they held in their rooms. After studying dinosaurs, drawing huge models, working with clay, building caves, using string to show size on the wall, and learning numerous complex vocabulary words with great enthusiasm, the lower primary children invited the students from the upper primary to a "clinic" on dinosaurs, where different children acted as guides at various exhibits and "lectured" about dinosaurs. Later the parents were also invited. After this experience, which the children handled with great ease, they were quite ready to move to special emphasis with the older children and changed classes and groups without any difficulties.

Each division spent the last month or two of the year planning for, designing, and creating a festival which was held one day during the final week of school. This center point for activities prevented the school program from dissipating in the spring, a common occurrence in many schools. The upper primary division created a Mexican fiesta with gay masks, flowers, pottery, native food, and skits and pageants surrounding Mexican festivals and customs. The lower primary presented a circus on the same day. Children "bought" tickets and could choose which of the various activities they wished to attend, including the circus. Stalls were set up where Mexican foods and students' art work and crafts were sold. The intermediate division capped their final unit on Japan with a Japanese festival set up in a similar fashion.

As the above examples indicate, the thrust of the experimental school was very much oriented toward providing a backlog of experiences on which the child could base his developing communication skills. This effort to provide an enriched environment succeeded to different degrees in different classrooms--in some superbly, in others much less effectively. However, generally the environment of the experimental school provided a wealth of experiences for the child which would not have been available to him in most classrooms of the control school.

b. Tailoring Language Skills to the Growth Sequence and Motivation of Children

Approximating the Process of Learning. Instruction rarely mirrors the natural sequence of learning in the conventional self-contained situation (see Piaget, Bruner, et al.). However, in a situation where teachers can work with experts through an intensive teacher education program and a consulting relationship to develop a child-centered school, the instruction is likely to approximate the natural learning sequences of the child, given competent staff. The continuous progress program was based on a progression of levels through which the child proceeds in language arts and mathematics. (The criteria for these levels were determined by a committee of teachers and advisers before the beginning of the school year.) During the course of the year, several of the criteria at different levels in language arts were changed at the suggestion of either teachers or reading advisers in the planning sessions. If several teachers or reading advisers commented that one particular skill seemed inappropriately placed in a given level, the staff would discuss this and decide where the skill could be better placed or how it could be modified. With this constant re-evaluation of criteria, based on the children's actual abilities to perform tasks at given developmental levels, the levels of language arts skills came closer and closer to approximating the actual growth process of the students.

Teachers of children at a given level based their classroom activities on teaching the process implied by the criteria for that level, focusing on the skills which the child required for growth, and building the curriculum around these rather than around preconceived adult notions of what children should learn. Facts, figures, and content were very evidently subordinate to developing the process of learning in children. Teachers were encouraged to provide activities which were child oriented and task oriented, rather than teacher centered. In many classes there was no feeling of a teacher-oriented situation but, rather, the activities of the children enveloped the room.

The reading advisers made every effort to help teachers to correctly diagnose the levels at which their classes were working and to develop appropriate instruction within this framework. With some teachers the specialists found it essential to encourage them not to push the children, not to teach above their heads. With others the problem was encouraging them to provide a sufficiently stimulating environment for the children.

For example, children in the lower primary were not pushed into reading. Instead, for the first half of the year, the teachers concentrated on pre-reading skills, building the children's experiences and developing spoken communication. In the second half of the year students began the more complex task of translating this communication into the written or printed form. The reading advisers encouraged the lower primary teachers to resist the compulsion to teach reading before the children were ready. Despite reservations the teachers heeded the specialists and patiently prepared the children with pre-reading skills. As a result, children in the lower primary did not begin to actually read until the second half of the year, at which time, because of their "reading readiness," they learned with great facility and enthusiasm.

The teachers introduced reading in the most natural ways--not with books, assignments, and worksheets but through the natural interests of the children. A child desired to learn to read and write when he wanted to send a birthday card to his mother or to label a picture he had drawn, or to read the instructions on how to feed the new gerbil or to figure out how many days it was until Halloween. The teacher read stories several times a day, but no child was compelled to listen--anyone could continue an other activity if he wished. Most children drifted over to the story corner quickly, but a few pursued other interests. As the year progressed more and more students expressed a desire to master the printed word, so that some pupils were actually pushing the teacher to give them the opportunity to learn to read books. As children began learning to read the teacher used word and reading games to help children acquire language. During one observation period the teacher was working with small groups of six or eight children to teach them beginning reading skills--having them put written descriptions with felt objects (i.e., "a green shirt," "a red shoe") and playing word games with great enthusiasm. The situation was constructed so that the pupils could have many successes. Many of these children were what might be classified as disadvantaged, but they were eagerly learning to read and learning well. The teacher, aware of the individual problems of each student, was attending to each child's needs. He was working with one hyperactive child patiently and painstakingly to help him develop more internal order and attention. One bright boy with a perception problem was learning to read at the speed he was capable of, without frustrations and the accompanying problems. In another situation, this child might have developed severe blocks to learning which could never be repaired.

As the children progressed to the intermediate division they were developing ever more complex communication skills, learning to order complex sequences of events, listing rules and guidelines, developing creative writing skills, communicating through speech. Plays and presentations were frequently utilized in both divisions for their value in developing communication skills, cooperation, and the abilities to plan and interact. The entire language arts program was seen as a continuum, a constantly increasing degree of complexity and intricacy of skills built upon the sound foundation of more basic skills. Children progressed through this continuum as they were ready.

The teachers' constant efforts to adapt the program to the developmental levels of the students were evident when they began utilizing learning centers, areas of the room where children could work individually. Each center contained two or more "stations" where a child could follow instructions, complete an exercise or experiment, and, frequently, check his learning himself with a self-administered questionnaire and key.

Teachers found it necessary to experiment until they developed a center which met the level and needs of the children. For example, one teacher who started with a center with six stations or steps found that his students could only work with about four different steps or simple directions and changed the center accordingly. Another learning center in the intermediate division revolved around a taped story the children listened to as they looked at the appropriate book; the children then answered questions, learned and alphabetized vocabulary, and put sentences about the events in the story in the order in which they occurred. They returned to the learning center each day to continue where they had left off the day before. Although the teacher had hoped this center would help his pupils learn to follow a series of directions, he found they could not remember what they had done the day before. Consequently, he revised the center to better meet the initial objective.

After several weeks of operating learning centers in the classroom the teachers discussed their successes and failures at a division planning session, sharing their experiences with each other and evaluating the general usefulness of the concept of centers. Most agreed that they were valuable.

The exceptional child--whether bright or slow, disturbed or handicapped--benefited from this program. Because it allowed each child to work at the pace which was best for him, the cognitive and personal development of the exceptional child was facilitated. For example, one bright but immature child was placed with older children, but with a teacher who understood his developmental level. In a normal first grade this child would probably have had a serious problem because he was so keen mentally but emotionally less able to cope with situations or other classmates. However, the teacher in this level realized that he was less mature and did not expect the same kind of behavior from him as from the other children, although he was constantly challenging the boy's mind. One primary child who had been through first grade was just learning to write the alphabet in the middle of the year. While the observer was present he ran around to classmates who were writing stories and collecting words they could not spell, then ran up to the teacher to ask for the spelling and reported back to the children. This teacher noted that he was very excited by this child, who was so exhilarated with this activity.

Curriculum Continuity. Despite the constant changing of both classes and teachers, the experimental program provided a continuity in curriculum which was not evident at the control school. This was the result of careful and intensive planning of study units in the instructional program, by teachers and program leadership. In each division, language arts and special emphasis periods were built around a given theme which was studied as long as the subject matter warranted it--ecology and pollution, Thanksgiving, fall, spring, Mexico, and Japan. All activities during this time period revolved around that central theme. Special emphasis gave children an opportunity to pursue more deeply one area related to the major area of study in language arts. For an ecology unit children might study pollution, the life cycle, social and political concerns, economics, the consequences of pollution to living things, actions which each child can take. Through such integration of concepts and activities each child could develop a deeper understanding of the world around him. Thanksgiving interest groups included all aspects of the holiday--a study of the values of the pilgrims (e.g., courage, honor); studies of pilgrims' or Indians' food, clothing, living arrangements; studies of ships such as the Mayflower.

Utilizing the Child's Inherent Motivation. Utilizing the internal motivation of the child is a crucial aspect of any program geared to the needs and developmental sequences of children. The program leadership was acutely aware of the importance of "tuning in" to the child's interests and concerns and constantly encouraged teachers to capitalize on this motivation. In the primary division at the experimental school, children were urged to label everything they made or did, to communicate through this means. They frequently expressed aspects of their own experiences in spoken or written language. During observations in one beginning readers class the teacher asked different students to tell something that happened to them, then summarized each account in a sentence on the board and had the children read it and underline words and parts of words. There was much free time for reading, copying, creative writing, and communications. The idea was to have the children use relevant experiences and tailor their word acquisition to their own needs so that they would develop a strong desire to read.

In other classes it was common to have the children work on projects about subjects of special interest to them that were relevant to current areas of study. These projects were then carefully described in written language by each child. With the younger pupils, sentences suggested by them were written on the board to be copied. Older children would write their own more elaborate sentences and stories to communicate what they wished to say about their projects. Students were frequently given a half hour or so of free time during the day to pursue projects or activities of their own choice. Generally, they worked communication skills into this time. For example, during the first observation period, the observer was present in one upper primary class where some boys who were more or less behavior problems for the teacher became enthralled with the study of space. They pored over books and charts of space flight and the planets and drew many pictures of planets, stars, and outer space exploration complete with monsters and space heroes. While writing sentences and descriptive words on their illustrations, they asked the observer to spell complex technical words. Several boys, reading books on space exploration, pointed out complicated equipment and spontaneously explained aspects in highly technical terms. The benefits of being aware of the interests and motivations of children were quite evident in this classroom and in many others at the experimental school.

Special emphasis time also allowed children to make choices about subjects they wished to study. One boy who wanted to be a chef told the observer that he loved special emphasis because he could learn about cooking so many different kinds of foods in various special emphasis classes during the year. Other children were eager to study space, or prehistoric animals, or ships, or clothing--to be able to choose among subjects.

c. The Mathematics Program: Barely a Beginning

As was mentioned previously, the mathematics specialist was unable to devote sufficient time to the experimental school to develop the mathematics program. As a result, mathematics was one area in which the school was particularly weak. Teachers found the mathematics program inadequate in terms of the definition and sequencing of levels, the diagnosis of the children, the integration of mathematics into the rest of the program, and the amount of expert help available to develop the program.

It must be pointed out, however, that for all its weaknesses the mathematics program seemed to benefit from the language arts program. Since the teachers were being trained to work toward optimal child development in their instructional program in language arts, there was some transfer of this into the mathematics program, so that it was somewhat more creative and less workbookish than the program at the control school. However, because it was not integrated into the rest of the school program, it did suffer from a kind of isolation. Teachers commented that they did not "feel responsible" for mathematics, since the majority of the children they worked with during most of the day were in someone else's mathematics class. Since the language arts teacher had no idea where each child was in mathematics, he tended to avoid bringing it into language arts, which broke up the continuity and relevance it might have had, despite the fact that mathematics might fit very naturally into the language arts or special emphasis times.

A concerted effort should be made to integrate the mathematics program into the rest of the school day and to coordinate the activities of the reading and mathematics advisers.

d. The "Content vs. Process" Dilemma

In any program which is attempting to mirror the growth processes of the child it is necessary to ensure that certain fundamental language and computational skills and certain substantive knowledge essential to everyday functioning is encompassed. Children require particular fundamental skills and information as fuel for the development of cognitive structures. In the process of trying to ensure that children do learn essential skills and information, a content orientation has developed in the public schools and has been reinforced by heavy reliance upon workbooks, tests, and achievement batteries. The kind of fragmented, nonrelevant program which can result was very evident at the control school.

Today the trend is away from this kind of content-oriented approach toward a process orientation. However, the new trend creates problems of its own, some of which were apparent at the experimental school. The main problem is the difficulty of teachers in adjusting to the process-oriented approach. Some teachers quite clearly were unable to develop priorities and to organize their day in order to accomplish everything which they felt was important. As a result, there was some disagreement among teachers over whether the children were getting enough of the fundamentals which they might require when they moved on to the conventional school for fifth grade. A few teachers were content oriented, and these were naturally dissatisfied with the program. They complained of the loss of control over content implied by giving the child a choice of areas of study in special emphasis and about the lack of concentration upon drill and memorization.

A number of teachers require more assistance in developing an understanding of the meaning of process and the importance of specific basic skills and information, and in learning to include essential aspects of the continuous progress program. Although the criteria, which teachers can utilize to determine the progress of children and the skills they should teach were set forth clearly, some teachers were having difficulty in translating these criteria into the concrete skills in the classroom. Improving teacher adjustment in this area would be very helpful to the program.

2. Opportunity to be Creative

Creativity among children (and teachers) was far more evident at the experimental school than at the control school. Most rooms in the former were filled with the children's handiwork--colorful bulletin boards and charts, creatures and pottery of clay, walls covered with art work and illustrations labeled by the students, shelves filled with their artifacts--clay, dinosaurs, baskets and pots, a large cardboard castle complete with knights and princesses. Some rooms had a feeling of gaiety and spontaneity even when empty because of the marvelous outpouring of children's work. The children's writing was also displayed everywhere, and there were frequent opportunities to be creative with acting, scenery, props, and costumes in the many plays which were put on during the year. In science the approach in most rooms was to let the students make discoveries themselves through experimentation--with machines, with the growth and development of plants, on the subject of ecology and pollution. Since there were no set texts which programmed a fixed sequence of learning, teachers were able to mold the curriculum to the needs and interests of the children, allowing them to experience the joy of spontaneous discovery. The enthusiasm of children pursuing the study of space, or of prehistoric times, or of plant life, was such that pupils frequently delved further into these topics in their spare time. A number of teachers pointed out that the creativity of the children, as compared to that elicited in more conventional situations, was one of the truly positive aspects of this kind of program.

a. Creative Structure, Not Regimentation

At the experimental school it was evident in many classrooms that there was no place for rigid routines and regimentation. Teachers were far more concerned with fostering a climate for optimal learning than with maintaining rigid control over the class. Because of the extensive educational and evaluative processes of the school, most teachers realized that orderly desks and quiet children were not the criteria by which they would be judged or by which they should judge themselves. Thus, they were able to accept far more variation in the activities and responses of the children and to utilize many more methods and techniques. Order was not a tyranny here; rather, teachers typically accepted and capitalized upon the natural impulses and creative needs of the children.

Tremendous insight and skill are required of any teacher to successfully foster creativity in this kind of program. Structure rather than regimentation is called for--the kind of structuring which permits children to move freely and work within their needs and interests at the same time as it provides an overall strategy for helping each child to develop his abilities to the utmost. This structure must be distinguished from the kind of regimented, tightly controlled situation in most control school classrooms, where the child had little or no freedom and very little opportunity to grow in the directions which would be most fruitful for him.

The program leadership constantly attempted to help each teacher to progress toward developing the kind of creative structure which would help each child reach his full potential, and frequently this involved loosening up the teacher and his constraints upon the children. For some teachers this loosening process was one of the greatest challenges; others seemed to move in this direction naturally and with great enthusiasm.

One example of a teacher who was masterful in achieving this kind of creative structure was a primary teacher with some of the youngest children who was able to give these students the freedom to carry out many independent activities on their own initiative. This teacher had all of this diverse activity beautifully controlled: with a quiet word the children would begin to move to their seats or to gather on a rug for more formal group instruction--a story, writing the date on the board, learning what over, under, and on top of meant. One had no sense of regimentation, yet there was order of the rare and creative kind. The teacher loved children and was comfortable with this situation.

The room was orderly, yet creative and exciting. Requests and suggestions were task oriented: explanation was clear to the children. The teacher took cues from the students to probe all the things which were most appealing to them. As a result the children were very eager to learn. They would run up to the observer or to other visitors in the room and ask the person to write words on the board for them, or to listen while they read a story, or to play a word recognition game with them, or to listen to them read directions for feeding the animals. (Rabbits, ducks, turtles, gerbils, and fish were taken care of by the youngsters.) The students wrote their own alphabet and numbers to be displayed around the room; they painted their own puppet theatre and made a three-dimensional "neighborhood" with everyone's house, the stop lights, and streets. Children were allowed to speak without first raising their hands: they learned much from the spontaneous comments of their classmates. The obvious vitality, creativity, and surge of learning in the room were truly impressive to an outsider.

The kind of structure which was present in the classrooms at the experimental school encouraged children to move freely, to interact meaningfully with each other, and to make the kinds of noises necessary to effectively carry out activities. Body movement was encouraged as a form of expression. Children were given many opportunities to dance, mimic, and act out songs, ideas, and communications.

Interaction among children was accepted and encouraged: teachers repeatedly told the observer that "children learned so much from each other." Students were allowed to tussle and play and converse. There was far more communication and group activity, and mutual aid in solving problems. As a result of this increased interaction, aggression was more obvious at the experimental school during the first observation period, although very little was noted during later observations as children developed more internal controls over their behavior. The aggression early in the year seemed to be a function of the increasing interactions of the pupils, and the interaction as a whole was positive--children helping, exploring and creating with, and learning from each other.

Working noise was readily accepted and encouraged at the experimental school. During the first observation period it was evident that some teachers were not certain where to draw the line between working noise and chaos. However, most had achieved a balance by the end of the school year. It was evident that the almost universal acceptance of this working noise and of the free movement of children around the rooms at many points in the day, as well as the tolerance of different forms of behavior from different children, was something that had been fostered by the administrators of the program. Most teachers seemed to be comfortable with these kinds of interactions in the classroom.

b. Testing is Subordinate to the Learning Process

One vital difference between the experimental and control schools was that while the instruction in most classrooms at the latter was test oriented, most teachers at the experimental school had learned to place their emphasis on the maximal development of the child. One of the articulated goals of the program was to have each child learn and develop for the sheer joy of exercising his powers and potentials, and many teachers were working successfully toward this goal. Of course, in many classes there were still quizzes and tests, but these played a subordinate role in the learning process. Most of the teachers seemed to have understood from the principal and advisers that achievement in the conventional sense was not their goal, that instead they would be evaluated in terms of the "process of education" as it occurred in the classrooms. Thus the teachers did not feel pressure to show results in superficial ways and seemed less defensive about the nature of the children they were teaching. They were less likely to complain to the observer about "slow" or disruptive children than the teachers at the control school. (In fact, the observer noted teachers excitedly pointed out less able children who were making progress in learning and behavior.)

The use of tests as supplements to the instructional process rather than as ultimate criteria was evident in one classroom where, after a review of multiplying two- and three-digit numbers, the teacher gave the children a choice between taking a final test, or having a workshop if they were still not confident of their facility with these numbers. About one-third of the children opted for the workshop, and the teacher had them gather with her in the front of the room while the other two-thirds of the class took the final test by themselves without supervision.

As a result of this atmosphere at the experimental school children were constantly creating--arts and crafts, projects for social studies and science, machines, plays, practical needs for the classroom. One was surrounded with children's activity and creativity.

3. Positive Attitudes Toward School and Learning

Teachers at the experimental school mentioned that the children seemed to enjoy school more than they had in previous years. The students were deeply involved in many of the classrooms--so much so that in some cases they did not want to break for recess, lunch, or to go home. Although boredom was evident in certain classes, for the most part it was the exception, rather than the rule.

The youngest children at the experimental school, excited and eager, were dramatically different from the youngest at the control school. They ran up to the observer (a complete stranger) to show him projects they were working on or to ask for help. Excitement and joy were everywhere--the joy of confidence and discovery. In contrast, the children at the control school approached the observer only after he had initiated interactions with them, and then with considerably more restraint. Much of the information so excitedly volunteered by experimental school children had to be elicited from the control school pupils.

Most of the teachers at the experimental school felt that children enjoyed changing classes and the variety in the day, although many also held the opinion that a more self-contained situation might be better. Many teachers were pleased with the enthusiasm and vitality of the children and felt that the experimental school had contributed greatly to this attitude. Only a few remarked to the observer that they thought the students were less motivated and less interested this year than in previous years. The positive feelings of the children were fostered by several attitudes and approaches which were encouraged among all staff members: children were not silenced when they responded enthusiastically and joyfully in school; they were given many opportunities to make choices during the day; they were not pushed or pressured into activities; and they were encouraged to develop at their own pace.

The spontaneity evident in most classrooms was encouraged rather than discouraged. The "ohs" and "ahs" and excited comments over a new discovery or some presentation were never suppressed--instead, teachers beamed with satisfaction to see that the children were so involved and appreciated the compliment implied. The eager child crying, "Teacher, I know the answer," was encouraged as long as other children had sufficient opportunity to express themselves. Though the observer frequently noted at the control school that children were "put in their place" for showing enthusiasm and wonder, this only occurred in a few classrooms at the experimental school.

In a school which attempts to design its program in terms of the ways that children learn, obviously one of the first rules would be that children are not pushed to produce, to achieve, to learn, but rather are stimulated by the skilled teacher so that their natural motivation and curiosity and desire for mastery become the predominant forms of motivation. For many children this philosophy seemed to result in a meaningful environment in which they could function.

B. Personal Development: Self-Awareness and Acceptance, and the Ability to Realize One's Potential

1. Children are More Mature, Independent, and Self-Controlled

Children seemed more mature, independent, and self-controlled at the experimental school. This was probably due to several factors built into the program. First, students were given the opportunity to make choices concerning many aspects of their own education; second, changing teachers and classes at different points in the day promoted a certain degree of self-reliance; and third, the philosophy and approach of the program consistently emphasized the personal as well as the intellectual development of the child. In a situation which allows children to choose, responsibility and independence are likely to be fostered. For example, during observations in one primary classroom the pupils were involved in many different activities simultaneously, studying at their own speeds in mathematics workbooks, working at learning centers, preparing several plays which they planned to present. With these young children the teacher was constantly aware of the need to supervise and structure more complex activities. Another primary teacher was using "committees" to work on games and tasks which he developed. Children divided into groups of five to work on these games--sorting tasks, counting tasks, matching tasks in mathematics and language arts.

In the experimental school, children constantly made decisions about what they were going to do and how they were going to approach different tasks. Going to the bathroom or the water fountain were left to the discretion of the children in most classrooms and they were free to slip out of the room at any time. Even in matters of discipline the observer frequently noticed that the burden of responsibility was placed upon the child himself. For example, in several instances children who were disruptive were told to take a library book and sit out in one of the carrels in the hallway until they were ready to rejoin the class as responsible members. In many of the rooms this kind of rational, effective discipline was all that was observed. A few teachers were incapable of handling children in this manner and resorted to the less constructive punitiveness evident in many classrooms at the control school.

The difference between the two schools was very evident in the everyday movements of the children. In comparison to the problems and crises involved in moving students at the control school, class changes at the experimental school were carried on with noticeable efficiency. One did not sense that teachers were spending vast energies keeping children in neat, quiet lines. Though there was some degree of confusion in the halls, the children all managed to get where they were going. One example of the internal control of the children was evident early in the year when all of the upper primary classes joined to see a film. There was some problem in getting the projector to work, and in the interim the pupils sat quietly talking with each other. One teacher started singing and the children joined in enthusiastically. In all, about 10 minutes must have passed before the projector was in working order, but during this time not one word demanding order was uttered by the teachers. In most similar situations at the control school, especially during the first observation period, teachers were constantly struggling to keep order.

The maturity and independence of the children were quite evident during the second observation period, when more than a hundred students were moved to different language arts groups on one day in an effort to improve grouping. This move caused no problems, no trauma for the children, although several teachers were apprehensive about it. Most teachers handled the move very quietly and calmly, without a fuss. In the morning they simply told the children to take their desks and move to various rooms. The whole transfer of 100-plus children took approximately ten minutes--there was no confusion or tears. The observer moved with one group of students who admitted that they were a bit frightened at first. However, many of the children had already worked with their new teachers for special emphasis or mathematics and thus felt confident. Most pupils were naturally unhappy to leave their teachers at first, but being separated from friends was by far the biggest complaint. Such a move at the control school would have been utterly chaotic.

The whole instructional approach was geared to giving children more initiative and responsibility. In most classrooms they had developed independence and initiative to the point that they could work individually on many different activities with minimal supervision. Students worked industriously when the teacher was busy with others in the class. There was not nearly as much of the "goofing off" and defiance as there was at the control school. The children's control was real and internal, and the interest was sustained. During a free activity period much of what was happening in a room might appear at first glance to be mass confusion. Yet, looking carefully, one could see twenty children engaged in a variety of experimentation, discovery, and growth--learning from and helping each other.

This development of responsibility and maturity cannot occur in a vacuum. It can occur only when the significant adults understand and fulfill the needs and concerns of children. For example, in one instance one of the youngest groups of children was in an uproar because a child ran tearfully into the room crying that Mr. Bells, a neighborhood cat the class had adopted, had been killed when some boys threw him over a wall. The teacher, seeing the grief and concern of the children and their helplessness in coping with it, sent a "committee" to investigate. They came back joyfully, crying "happy news, happy news" with a very much alive Mr. Bells in their arms. By demonstrating empathy and concern, and by offering constructive solutions to dilemmas, a teacher can provide a milieu in which children can mature.

A number of teachers told the observer that they felt the children developed more responsibility as a result of the program. One way in which this was apparent was in the manifestations of aggression at the experimental school. As was pointed out previously, although the observer had noted more aggression among students at the experimental school during the first observation period, by the second observation period there was practically none observable, and this continued throughout the year. This group of children had "settled down," just as those at the control school had, but they had done so in a very different way--on their own initiative, without being subjected to punishment and regimentation. They had developed internal controls which they exercised constantly, showing a great deal of individual initiative and responsibility as compared to the children at the control school. They were quite capable, without teacher supervision, of carrying out activities in the classroom, moving from class to class, and making decisons about the kinds of activities they wished to engage in.

Despite these successes, there were a few teachers who felt that the program caused some difficulties in the development of children's self-control and independence. Several teachers thought that in this kind of grouping situation older children sometimes exerted a negative influence on younger children performing at the same level. Several classrooms also acquired an unusually large number of students who were discipline problems, thus placing them in a situation of feeling labeled as the "rowdy class." A few teachers felt that the less secure or overactive child could benefit more from a self-contained, structured situation.

2. A Less "Feminized" School

One of the major criticisms expressed in the literature about the public schools, especially at the elementary level, is that they are so feminized that they are irrelevant to boys. This factor and the slower maturation of boys contribute to a rate of learning and motivational problems consistently higher for boys than girls. A feminized approach was evident at the control school, where, except for the principal and one physical education instructor, all teachers were female. Yet, at the experimental school, where the principal and reading coordinator were the only males, the staff was very conscious of this problem and attempted to counteract this tendency to a certain degree. (It must be noted from the outset that a reasonable percentage of male teachers are essential to the development of a truly masculine oriented school.) For the boys, there were many subjects of fascination--dinosaurs, outer space, knights and castles, machines, cars, ships.

The special emphasis period offered a tremendous opportunity for boys to study topics which were especially pertinent to them. The amount of interest generated by some of these topics among boys was truly impressive. One notably successful special emphasis situation was based on the topic of "Knights and Castles," which appealed particularly to the boys. The class consisted of twenty-six boys, including some of the most unmanageable in the primary division, and three girls. The teacher admitted to shuddering the first day of class, but the subject and the instruction generated so much enthusiasm and excitement that the children worked beautifully building a model of a castle from scratch, making their own coats of arms and shields, studying about medieval life.

3. Benefits for the Exceptional Child

The so-called exceptional child--whether exceptionally bright, unusually slow, plagued with personal and emotional difficulties, or from a disadvantaged environment--generally seemed to benefit in the atmosphere of the experimental school, although there were a few graphic exceptions to this. One of the advantages of this kind of grouping situation is that, most often, the exceptional child is placed in a position where he is not isolated or labeled, where he can blend in and "belong" with his classmates.

It was striking that although the observer followed bright, average, and slow children at the experimental school, all students seemed to fit into their classrooms in such a way that they could not be labeled or differentiated by their relationships with other children or with the teacher. There were no "slow" rooms or "fast" rooms, but rather levels at which children were working. Thus, a child was not so obviously different--so obviously slow or so obviously bright. Of course, the students were generally aware of where they stood in relation to other children of their own age, but in most classrooms there was no pressure, no stigma, no label for the slower (or faster) child. He was performing with others at his own level of development and thus was not constantly confronted with the comparative achievements and facility of his age-mates. Thus, the slower child experienced success instead of the failure so prevalent in many public schools.

Although the teachers were aware of the developmental level and potential of each child, most did not fall back on stereotypes or isolate specific children as being poor or slow. Rather, they seemed to have a very egalitarian approach to the children. Typically, the lot of the exceptional child was really no different from that of other children in this school with the exception of a very few abnormal children who seemed to have teachers who could not handle them.

In one case where a number of children who knew they were "problems" were collected in several classrooms for language arts, the program leadership made a conscientious effort to dissolve this effect by seeing to it that these students were mixed with other children for as many other parts of the day as possible. This involved changing special emphasis and physical education classes and was inconvenient from the viewpoint of the teachers, but breaking up this feeling of being labeled was sufficiently important to the leadership that they gave it top priority despite some teacher dissatisfaction.

Most of the teachers in the experimental school evidenced no prejudice against disadvantaged or slow children. In fact, many of them seemed to take a certain pride in the way that a number of these students were improving and developing. They would make a special effort to point them out to the observer--the slow boy who was learning to read, the immature child who had adjusted so well, the "school hater" who was beginning to enjoy coming to class. Many of these teachers seemed ready and willing to exert the extra effort required to help these children to grow and develop.

There were a few conspicuous examples of children who were misplaced during the year, much to their detriment. One brain damaged child and one "hyperactive" child spent much of the year with teachers who could not cope with them, or even begin to understand them. As a result, faced constantly with exasperated and frustrated rejecting teachers, both of these children seemed to deteriorate over the course of the year. When asked about the brain damaged child, the program leadership stated that they had left the disposition of the case in the hands of the elementary school counselors, and they had elected to leave the child where he was. Given the philosophy of the school, this seemed to be an inappropriate "pass the buck" response. One recommendation for the experimental school might be that in future years the staff pay closer attention to children with severe problems, and attempt to place them in optimal ways, even if this requires some twisting of the program. Because teachers are currently distributed throughout the school it is almost impossible for a child with severe problems to bypass teachers who will aggravate them. Some redistribution of teachers to allow breathing space for such children would be desirable.

Another small group of students (fewer than ten) was academically neglected during the year and consisted of non-English speaking foreign children. Although some effort was made to place them in their appropriate groups, in general the teacher attended to them only when he was able to find a few spare moments, which seldom occurred. Even the better teachers were forced to neglect these students in order to give the rest of the class sufficient attention. Generally, these children just sat, and tried to struggle with words and numbers on their own. Some arrangement to give these few children concentrated instruction in English would be very helpful. They should not be isolated in special classes, but rather some attempt should be made to teach them English in special groups at some point in the day.

C. Social Development: Social Awareness, Concern, and Action

1. Appreciation of Human Differences

The importance of the attitudes of significant adults in the development of the values of children was discussed previously. In the experimental school, where exceptional children--especially slower or disadvantaged children--were not singled out for labeling by teachers, where teachers seemed to see each child as worthwhile regardless of his handicaps, children were bound to develop positive feelings about others who were different. The clearly positive attitude of many teachers toward all children in their classes provided an atmosphere in which children could develop these same attitudes. In this respect, the experimental school differed significantly from the control school, where teacher prejudice toward the socioeconomically or intellectually disadvantaged children was common.

In the experimental school the presence of children of foreign college students provided the students with an excellent opportunity to interact with others of many nationalities. Although the appreciation of human differences was not an immediate goal of the program, the general atmosphere of the school, with its acceptance of the worth of every child, communicated this value far more effectively than any curricular design.

2. Responsible Citizenship

In the experimental school, where children were encouraged to make choices about their activities and their conduct and to develop independence and initiative, the maturity and responsibility required for good citizenship were fostered quite naturally.

The school structure also built in situations for children to help each other. In special emphasis there were significant differences in skill levels, and thus the older children frequently helped younger ones with activities. In one the observer noted the older children writing sentences under the younger ones' drawings and teaching them to read the sentences for a presentation to other classes. In the case of foreign students who were just learning the language there were also many opportunities for the children to be helpful although these were not always capitalized upon.

The general atmosphere of the school was conducive to the development of responsible citizenship. There were opportunities for children to care for living animals, to help teach others, and to exercise maturity and responsibility.

3. Appreciation of Human Achievement

The careful planning and continuity in the curriculum of the experimental program provided an excellent base from which children could develop an understanding of man and his place in the universe. The fragmented, isolated skill and information approach so common at a graded school contributes little to a profound understanding of man and the world; but a continuous progress curriculum geared to the developmental levels of children can lay the foundation for a deep understanding and appreciation. Children at the experimental school were also able to pursue those areas of human achievement most fascinating to them in special emphasis. All in all, the experimental program appeared to do a far better job of encouraging children to tune in to the exciting world of nature and technology than the control school.

The goals of social awareness, concern, and action were met far more effectively at the experimental school than at the control school. The whole process by which children were encouraged to develop their full personal and intellectual potential, to become self-reliant and mature, contributed to this development. Children tend to assume the social attitudes and prejudices of the adults around them. In the experimental school, where most teachers accepted and encouraged all children, regardless of their personal attributes, students were encouraged to develop positive feelings about and to accept differences in each other.

The continuity of curriculum and attention to the interests of children provided a base for the development of a profound understanding of man and his place in the world. Generally, the thrust of the program was in the direction of greater social awareness, concern, and action, and this orientation hopefully will increase in coming years.

D. Conclusion

Although the quality of the program varied from excellent to poor in different classrooms of the experimental school, in general the school environment appeared to contribute greatly to the growth and development of the children. The continuous progress program was built on the concept of child-centered learning. Adding to the experiences of children through an enriched environment and the child's individual investigation of the world around him were viewed as important aspects of the educative process. Education was tailored to the growth sequences of the child through the use of a nongraded program based upon carefully developed criteria for the developmental levels of children. In this situation, each child could advance at the pace which was most beneficial to him. Curriculum continuity was a goal of the many planning sessions in which units and programs were developed based on the needs and interests of the children. Although language arts was highly developed as a result of the intensive efforts of the reading advisers, the mathematics program left much to be desired. It was disengaged from the rest of the school day and was less successful in meeting the needs of the students However, mathematics did benefit to some degree from the rest of the school program.

The problem of teacher adjustment contributed significantly to the difficulties some teachers had in fitting all skills and information which they considered to be essential into the day. Thus, certain teachers were concerned about whether their students were receiving enough of the fundamentals they would need when they moved on to a graded school. This problem could be solved in the future through teacher education and adjustment.

Creativity was definitely fostered in this school through an effort to develop creative structure, rather than the regimentation and order evident at the control school. The program leadership worked constantly toward helping each teacher to develop the kind of classroom structure which would give each child optimal opportunities for growth. In this kind of a program, where the program leadership had developed explicit goals which were expressed to the teachers, testing and achievement orientation became subordinate to the learning process in many classes. Teachers were secure in the knowledge that the leadership would back them up in promoting the less obvious but more vital aspects of education, the maximum positive growth and development of the child.

At the experimental school, where children's interests and needs were foremost, positive attitudes toward school and the learning process were inevitable. Children seemed much happier and more spontaneous at the experimental school.

The attempt was made to utilize the inherent motivation of the children through interest groupings and to gear the program to the needs of children. Those with educational and personal handicaps seemed to benefit significantly from the program and to develop motivation and enjoyment of school, qualities rarely observed at the control school. Many teachers took great pride in the success of disadvantaged children and made extra efforts to provide a stimulating environment for them.

The experimental school also contributed more to the children's self-awareness and self-acceptance, and to the ability to realize their potential. Students were mature, independent, and self-controlled. In the process of changing classes and teachers, of deciding for themselves about activities and utilization of free time, of moving without supervision in the hallways, and making their own decisions about using the toilets and water fountains, children developed internal controls over their behavior. Thus, many activities which necessitated endless organization and discipline on the part of many control school teachers required little or no discipline at the experimental school. Students were quite capable of behaving maturely and independently. This school also provided more for the male children in that, despite the fact that all teachers were females, there was a certain emphasis on insuring that boys were given opportunities to explore those areas of special interest to them. As a result, boys who had been behavior problems could be seen entirely wrapped up in projects, something which rarely occurred at the control school.

For most exceptional children at the experimental school the program provided far more opportunities for growth and development than a conventional program. Most were placed in classrooms where they could develop at their own rate and with consideration for their own problems. A few children were misplaced with teachers who could not cope with them and only served to heighten their problems, but the assignment of teachers during this initial year of operation made it very difficult for children to bypass such teachers. More dispersion of less competent teachers would improve this situation.

Thus, the experimental program contributed far more to the development of maturity, independence, and self-control than the control school, and provided extra benefits in that the program was more "masculine-oriented" than most elementary schools, and generally presented opportunities for the exceptional child to be placed in an optimal educational environment. The experimental school also contributed far more to the development of social awareness, concern, and action. Most teachers not only showed no evidence of prejudices, but actually were excited by the achievements of handicapped or disadvantaged children. Thus, children had many opportunities through positive models to develop healthy attitudes about people who were different. Also, in a situation where independence, maturity, and self-control were cultivated, children could develop the qualities necessary for good citizenship. The continuity of curriculum and the effort to integrate the curriculum into a meaningful program provided students with a framework in which they could begin to appreciate the world around them and man's place in it.

It must be emphasized that the experimental program was far from perfect during the course of its first year of operation. The impression which one receives from the two schools is that the general direction of the continuous progress program was highly positive. Therefore, the evaluation of the experimental school was made in terms of how it evolved during the year. With respect to the control school, the program remained static throughout the year. This makes it possible to examine the control school environment as if it were frozen in time. It must also be emphasized that these generalizations do not apply to specific classroom situations, which varied in quality of educational programs from poor to excellent in both schools.

CHAPTER 8

CHANGES IN CHILDREN'S ACHIEVEMENT AND ATTITUDES TOWARD SELF IN CONTINUOUS PROGRESS AND GRADED PROGRAMS

The most critical effects of any school program are upon the children whom it was designed to educate and whose needs it was designed to serve. Chapter 2, which summarizes other studies of nongraded programs, reveals that claims of the superiority of the nongraded over the graded program are most often phrased in terms of improved learning and student adjustment. However, these evaluations, which have measured these two factors by the utilization of certain tests, have most often found that continuous nongraded programs are neither significantly better nor worse than graded programs.

The preceding chapters, evaluating the continuous progress program and the self-contained classroom program on the basis of observation, tended to indicate the "superiority" of the former over the latter in terms of intellectual development, personal development, and social development. This conclusion, however, is based on observation and not on the testing of individual students. The purpose of this chapter is to examine the two programs in terms of achievement test scores and attitude measures. The methods employed in the gathering and analysis of the data are explained in detail in Appendix A.

Although evaluation by observation is subject to severe limitations, there are also limitations inherent in evaluation by achievement test scores and attitude measures, particularly when a comparison is made between a continuous progress program and the self-contained classroom program. Therefore, before analyzing the data on the basis of test scores and attitude measures it is desirable to set forth briefly these limitations, particularly those relative to this study.*

A. Limitations of Achievement Tests and Attitude Measures

a. Standardized achievement tests have been designed primarily to serve the needs of graded schools. They are based on norms for what the average student is achieving at any given grade level. These scores, while they do give a comparison of relative achievement levels, may not reflect accurately what a continuous progress program is trying to achieve with its students.

b. The different test batteries are set up to be given only in certain grades. The flexibility of the nongraded levels means that some children may have taken the "wrong" test battery. The test publishers state that this is not a real problem so long as the grade-placement scores are used rather than raw scores or percentiles, but it is possible that student achievement may be understated by this adjustment.

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*Appendix A describes in detail the procedures followed in testing, some of the problems encountered, and the methods employed for adjusting the data in view of these problems.

c. There was the usual problem of missing data at both schools. Some children were absent during part of the tests. While much of this was caused by real sickness, some of the absences may have been based on test avoidance. This would put a definite bias into the data, and there is no way of determining whether the bias was evenly divided between the two schools. Given the emphasis of testing in the graded school it is likely that the test avoidance factor was less significant for that school. Although test arrangements could have been made for absentees, it would have caused operational difficulties for the schools involved since they were already struggling with the testing which normally took place at that time.

d. Administration of the tests was not the best. It was decided to have the teachers administer them because their deficiencies in doing so would cause fewer problems than those caused by bringing strangers into the classroom. The testing process was better in the spring, but was still not satisfactory because some of the teachers unknowingly might have influenced the outcomes from a sense of insecurity.

e. Whenever a direct comparison between a graded and a continuous progress school is made, using any given set of criteria, there must be certain compromises. These compromises become necessary because the two schools were so fundamentally different in their objectives and in their orientations to students that they really cannot be judged by the same criteria. A direct comparison, however, requires that only one set of criteria be used for both types of program.

f. When direct comparisons are made using achievement test data, there is a bias which probably tends to favor the graded program. These tests are designed to apply to a graded form of education; they correspond to its curriculum goals and contain the inherent assumption that all children must be compared to a grade-level standard and should "measure up to" this standard of achievement. In the present case, however, the nongraded school was still operating with a traditional curriculum, so that the content of the curricula in both schools was approximately the same and, therefore, this problem is less severe.

g. There were initial difficulties in the original assignment of children to appropriate levels and the extent to which the children were mis-assigned is the extent to which their achievement scores may have been understated, particularly if they were originally placed in a level higher than the one to which they were eventually assigned.

B. Academic Achievement

Intelligence and achievement tests were administered to the children in each school at the beginning of the school year and again at the end of the year. Preliminary analyses of the data indicated that the average IQ scores of students in the continuous progress program were not significantly different from those of the graded students. It was not necessary, therefore, to correct the achievement test scores for overall IQ differences. These preliminary analyses did show, however, that the students in one school were at achievement levels which were significantly different from those of the students in the other school. In order to avoid the statistical problems involved in "correcting" these pre-existing imbalances, all further analyses were based upon gains in achievement over the year rather than upon actual levels of achievement. These gain scores reflect changes in achievement from pretest to posttest; they are reported in terms of "units of change" which have been converted from the raw scores on each test, rather than in terms of grade-placement scores.

A comparison of the overall differences in achievement gains over the school year in each type of program is presented in Table 1. For the Durrell Listening-Reading Test, gains were separately calculated for the listening and reading subtests and for the "listening-reading differential," a score which shows how closely a child's actual reading achievement approaches his potential reading achievement (as estimated by his listening vocabulary and listening comprehension). The lower the differential score, the more closely actual reading achievement approaches potential reading achievement; minus scores indicate that the child's actual achievement is greater than his potential achievement. For the Stanford Achievement Tests a gain score was calculated for each subtest in the test battery.

Of the eleven comparisons which were made between the continuous progress and graded programs, five produced statistically significant differences. A check upon the direction of these differences indicates that in all five cases the gains made by the graded students were larger than those made by the students in the continuous progress program. Looking only at these gross, overall

Table 1

Gains in Achievement Over the School Year

Test	Average Gain Scores[a]		t	p.
	Continuous Progress	Graded		
Durrell Listening-Reading Test				
Total Listening	7.7	9.7	2.45	<.05
Total Reading	8.6	9.3	0.81	NS
Differential[b]	0.2	0.9	0.58	NS
Stanford Achievement Tests				
Word Meaning	8.4	7.9	0.71	NS
Paragraph Meaning	7.5	6.9	0.71	NS
Spelling	6.8	10.0	4.12	<.001
Word Study Skills	6.0	9.7	3.54	<.001
Vocabulary	8.2	9.7	0.67	NS
Language	5.9	12.5	5.09	<.001
Arithmetic	7.8	11.1	5.06	<.001
Science and Social Studies	5.4	7.7	1.95	NS

[a] Posttest score minus pretest score. "Gain score" units converted from raw scores.

[b] The listening-reading differential is a test of how closely the child's reading accomplishment matches his reading potential. The smaller the score, the better.

figures, one would therefore be inclined to conclude that the graded program's effects upon academic achievement were more positive than the effects of the continuous progress program in about half of the skill and content areas, and that there were no differences between programs in the other areas. It is noteworthy that for the four areas of the SAT in which gradedness showed significant effects, each of these areas represented tests of achievement based on emphasis on content and achievement, some of which can be handled by an emphasis on drill and practice, without understanding.

One must be careful, however, not to make judgements on the basis of an overall comparison of the two programs. Such an analysis may be misleading unless other factors are taken into account. Two such factors were found to be of critical importance in the present case. Each of them represents a consideration of the complexities involved in attempting to compare gradedness per se with continuous progress per se when only one example of each type is available for study. This limitation requires a careful analysis of other factors which can influence the results.

The first consideration which must be examined centers upon the fact that the continuous progress school which is under consideration was in its first year of operation when the data were collected. Therefore, there are two extraneous factors which may have exerted influences upon the overall data gathered in this school, both of which involve the transition from a graded orientation to a continuous progress orientation, a transition which must be made by both students and teachers. The first of these is that operational difficulties in getting the program under way may have constrained the short-term achievement of certain students. The observations reported in Chapter 4 indicated that the intermediate division in the continuous progress school, which contained the older children, was not able to make the transition from a graded to a continuous progress operation as smoothly as the primary division, which contained the younger children. Even by the end of the year, there was some indication that the intermediate division was not functioning as well as the primary division. Table 2, however, shows that the "achievement gains" problem could not have been a function of these difficulties. The average gains in achievement in this division were not significantly different from those of the primary division. The second is that the older children in this school had been exposed entirely to the graded form of education during their previous school experience. Three-fourths of these children had experienced at least one year of graded schooling; one-fourth had experienced three full years of graded schooling. Children who were in their first year of school, on the other hand, did not have to transfer their orientations from graded to nongraded; their orientation problem might have been one of adjusting to school itself.

Therefore, there were some good reasons to believe that the observed differences in overall achievement gains may have been more a function of problems of reorientation for older students in the continuous progress school, rather than a true difference between graded and continuous progress operations. In order to test this hypothesis, two additional analyses were carried out. These involved

Table 2

Achievement Gains
Continuous Progress Program, by Division

Test	Primary Division	Intermediate Division	t	p.
Durrell Listening-Reading Test				
Total Listening	6.0	9.1	2.82	<.01
Total Reading	9.0	7.9	0.71	NS
Differential	-1.3	1.1	1.05	NS
Stanford Achievement Tests				
Word Meaning	9.1	7.8	1.30	NS
Paragraph Meaning	6.7	8.0	1.22	NS
Spelling	7.6	5.9	1.75	<.10
Word Study Skills	5.1	6.5	0.97	NS
Vocabulary	8.0	--	--	--
Language	--	5.6	--	--
Arithmetic	6.5	7.7	1.05	NS
Science and Social Studies	--	5.2	--	--

separating out the test scores of the youngest students in each school, those who were attending school for the first time, and making comparisons across school programs for the two different age groups--first-year students and all others. The results of these analyses are presented in Tables 3 and 4.

The analysis of the gains made by first-year students in each school, presented in Table 3, tends to support the hypothesis. The differences in achievement between graded and nongraded students virtually disappear when only the first-year students are examined. Of nine comparisons, only two produced statistically significant differences; they were found on two subtests which measure similar skill areas. Since one difference was in favor of the graded school and the other favored the continuous progress school, they may balance each other out. In effect, there would appear to be no differences in average achievement gains between the continuous progress and graded programs among students who had had no previous school experience.

The analysis of gains made by second-, third-, and fourth-year students is presented in Table 4. This analysis also supports the hypothesis. Because all of these students had had previous experience with graded schooling, any problems of reorientation among the nongraded students should show up in the performance of these children. As the figures in this table indicate, all of the significant gains by the graded students were found in this age category and involved areas in which achievement could be attained on the basis of rote memorization. It is not unreasonable to conclude, therefore, that

Table 3

Gains in Achievement--First-Year Students

Test	Average Gain Scores[a]		t	p.
	Continuous Progress	Graded		
Durrell Listening-Reading Test				
Total Listening	5.6	8.0	2.12	<.05
Total Reading	4.2	4.9	0.24	NS
Differential[b]	1.2	3.5	0.55	NS
Stanford Achievement Tests				
Word Meaning	8.3	5.4	2.78	<.01
Paragraph Meaning	5.1	3.2	1.50	NS
Spelling	7.4	10.6	1.26	NS
Word Study Skills	7.8	6.4	0.84	NS
Vocabulary	9.9	9.2	0.28	NS
Language	c	c	c	c
Arithmetic	9.9	9.4	0.26	NS
Science and Social Studies	c	c	c	c

[a] Posttest score minus pretest score. "Gain score" units converted from raw scores.

[b] The listening-reading differential is a test of how closely the child's reading accomplishment matches his reading potential. The smaller the score, the better.

[c] The Stanford Achievement Test battery for first-year students does not include subtests for language and science and social studies.

Table 4

Gains in Achievement--Second-, Third-, and Fourth-Year Students

Test	Average Gain Scores[a]		t	p.
	Continuous Progress	Graded		
Durrell Listening-Reading Test				
Total Listening	8.2	10.2	2.13	<.05
Total Reading	8.8	10.3	1.55	NS
Differential[b]	1.6	2.0	0.03	NS
Stanford Achievement Tests				
Word Meaning	8.5	8.6	0.18	NS
Paragraph Meaning	7.9	8.0	0.06	NS
Spelling	6.7	9.9	3.95	<.001
Word Study Skills	5.5	10.7	4.17	<.001
Vocabulary	3.7	12.7	1.51	NS
Language	5.9	12.5	5.09	<.001
Arithmetic	7.7	11.8	5.62	<.001
Science and Social Studies	5.5	7.7	1.95	NS

[a] Posttest score minus pretest score. "Gain score" units converted from raw score.

[b] The listening-reading differential is a test of how closely the child's reading accomplishment matches his reading potential. The smaller the score, the better.

the differences in achievement gains may not have been a function of the type of school organization. Rather they may have been a function of the difficulties encountered in the transition from one type of program to the other, difficulties which appear to have produced a short-term retardation in the achievement of the older students in the nongraded school.

In view of the finding that there were no significant differences between the first-year students of the graded and the continuous progress schools and that there were some differences in favor of the second- through the fourth-year students as a group, one would expect to find some pattern existing among the scores of the first-, second-, third-, and fourth-year continuous progress students. One might also expect that this pattern would not be found among the graded students.

Analyses of the achievement gains by years in school are shown in Tables 5, 6, and 7. Table 5 contains the A-B interaction term for a two-factor analysis of variance with school program as Factor A and year in school as Factor B. Of the eight possible comparisons only four are significant, and one of these at only the .10 level. (Note that the mean scores in the first column of this table are slightly different from the mean scores in Table 3 in Chapter 4. This is because in Table 3 age was used to separate out the first year students, while in the present analysis they were identified by actual year in school, according to the school's records.) On three of the tests where significant differences were found, the first-year continuous progress students had gained more than the first-year

Table 5

Achievement Gains, by Program and Year in School

Test	First Year		Second Year		Third Year		Fourth Year		F	p.
	Continuous Progress	Graded	Continuous Progress	Graded	Continuous Progress	Graded	Continuous Progress	Graded		
Durrell Listening-Reading Test										
Total Listening	5.5	7.1	6.3	9.1	8.8	10.1	9.5	12.4	0.25	NS
Total Reading	3.3	4.4	10.5	12.4	7.0	9.1	8.9	11.0	0.05	NS
Differential	4.0	3.7	-3.1	-2.9	2.3	0.3	-0.2	1.9	0.63	NS
Stanford Achievement Tests										
Word Meaning	7.6	4.9	10.0	10.1	9.6	6.7	6.1	9.9	4.17	<.01
Paragraph Meaning	5.3	3.0	7.4	10.0	9.4	7.3	6.8	8.1	2.21	<.10
Spelling	7.6	8.2	7.6	13.8	5.9	8.2	6.0	9.3	1.77	NS
Word-Study Skills	7.7	5.7	3.6	15.6	7.6	7.4	5.6	12.0	8.76	<.01
Vocabulary	9.7	9.7	4.1	15.5	--	--	--	--	--	--
Language	--	--	--	--	4.9	10.8	6.2	14.5	--	--
Arithmetic	9.2	9.0	6.0	11.8	7.5	11.1	7.8	13.5	2.59	<.05
Science and Social Studies	--	--	--	--	5.2	6.7	5.2	9.2	--	--
n	35	48	58	37	58	45	59	44		

Table 6

Achievement Gains, by Year in School
(By Months)

Test	Continuous Progress School				F	p.
	Year 1	Year 2	Year 3	Year 4		
Durrell Listening-Reading Test						
Total Listening	5.4	6.3	8.8	9.5	2.61	<.10
Total Reading	3.3	10.5	7.0	8.9	1.77	NS
Differential	4.0	-3.1	2.3	-0.1	1.81	NS
Standard Achievement Tests						
Word Meaning	7.6	10.0	9.6	6.1	3.72	<.05
Paragraph Meaning	5.3	7.4	9.4	6.8	1.85	NS
Spelling	7.6	7.6	5.9	6.0	1.04	NS
Word Study Skills	7.7	3.6	7.6	5.6	1.75	NS
Vocabulary	9.7	4.1	--	--	--	--
Language	--	--	4.9	6.2	--	--
Arithmetic	9.2	6.0	7.5	7.8	0.96	NS
Science and Social Studies	--	--	5.2	5.2	--	--

Table 7

Achievement Gains, by Year in School

Test	Graded School				F	p.
	Year 1	Year 2	Year 3	Year 4		
Durrell Listening-Reading Test						
Total Listening	7.1	9.1	10.1	12.4	3.55	$<.05$
Total Reading	4.4	12.4	9.1	10.0	8.65	$<.01$
Differential	3.7	-2.9	0.3	1.9	3.10	$<.05$
Stanford Achievement Tests						
Word Meaning	4.9	11.0	6.7	9.9	4.93	$<.01$
Paragraph Meaning	3.0	10.0	7.3	8.1	6.72	$<.01$
Spelling	8.2	13.8	8.2	9.3	4.40	$<.01$
Word Study Skills	5.7	5.6	7.4	12.0	8.17	$<.01$
Vocabulary	9.7	15.5	--	--	--	--
Language	--	--	10.8	14.5	--	--
Arithmetic	9.0	11.8	11.1	13.5	3.78	$<.05$
Science and Social Studies	--	--	6.7	9.2	--	--

graded students; on the fourth significant comparison the two groups were about equal. However, when the scores of the second-, third-, and fourth-year students are examined year by year, no clear pattern is revealed. Thus, on a between-schools comparison, there is no solid evidence that amount of previous graded experience was related to reorientation difficulties.

Tables 6 and 7 show breakdowns of the years-in-school variable within each school program. Within the continuous progress school, only two comparisons are significant and only one of these shows a clear pattern (Durrell Listening Test). This pattern is in the opposite direction from what one might predict. In addition, an examination of all the test results, significant and nonsignificant, shows no consistent patterning of increases and decreases in mean scores.

Within the graded school, significant differences were found on all of the tests. However, there is again no clear pattern of increases or decreases with greater school experience. Rather, certain grades seem to have greater increases in certain areas--for example, notable increases in spelling and reading gains in second grade, and in arithmetic and "word study skills" (grammar and phonetics) in fourth grade. These could be functions of maturity, teacher quality, or even curriculum design.

Therefore, a test of the effects of the continuous progress operation available to this study may be found in the analysis of the achievement gains of the first-year students. One of the claims made for the superiority of nongradedness is that it eases the transition of children from nonschool status into school status since a continuous progress program recognizes differences in "readiness" for school. Such a transition is difficult for most children; if the above claim is accurate, it would be a strong argument in favor of the continuous progress approach. The findings of the present study (Table 3) do not entirely support this claim. In terms of academic achievement during the first year of school, given the limitations of the testing process discussed earlier, whether the child attends a graded or a continuous progress school appears to make no significant difference whatsoever.

Another critical consideration which must be taken into account in interpreting the differences in overall achievement gains concerns differences in children's ability levels. A continuous progress program may claim that its real advantages lie in its treatment of the very able student and the very slow student. If this is true, then there may be important differences between schools which would show up only among the students who fall into the upper and lower portions of the intelligence distribution.

This problem can be approached in two ways. One is to combine the students of highest and lowest abilities in the continuous progress school and then compare this group to its graded counterpart. The results of such an analysis are shown in Table 8. Included in the table is a similar comparison of students of medium ability. This analysis shows that the differences between schools were not a function of levels of student ability, for they remained when the combined high and low ability groups were separated out. The analysis also shows that in every case where a significant difference between graded and

Table 8

Gains in Achievement, by Students' Levels of Ability

Test	Students of Highest and Lowest Abilities		t	p.	Students of Medium Ability		t	p.
	Continuous Progress	Graded			Continuous Progress	Graded		
Durrell Listening-Reading Test								
Total Listening	6.1	11.2	3.87	<.001	9.2	8.8	0.36	NS
Total Reading	7.6	10.6	1.99	<.05	9.1	8.7	0.31	NS
Differential	-0.4	1.7	1.15	NS	1.1	0.3	0.59	NS
Stanford Achievement Tests								
Word Meaning	7.8	8.3	0.49	NS	8.5	7.5	0.92	NS
Paragraph Meaning	6.0	6.4	0.29	NS	7.8	7.3	0.47	NS
Spelling	6.4	10.7	3.31	<.01	6.6	9.4	2.81	<.01
Word Study Skills	6.5	8.6	1.25	NS	5.0	10.2	3.78	<.001
Vocabulary	6.4	6.4	0.01	NS	8.3	10.0	0.74	NS
Language	3.3	12.8	4.94	<.001	8.0	12.5	2.61	<.05
Arithmetic	7.4	12.1	4.15	<.001	8.1	10.8	3.22	<.01
Science and Social Studies	4.6	3.5	2.15	<.05	6.2	7.2	0.62	NS

continuous progress students was found, the graded students produced greater gains in achievement. Once again the areas are those which usually involve rote memorization. On a between-schools comparison, the highest and lowest ability students from the continuous progress school did not outperform their counterparts in the graded school.

Another way to approach the problem is to compare the students of highest and lowest ability in the continuous progress school with the students of medium ability in the same type of school. The comparison may determine whether the exceptional children within this program did, in fact, fare better. This analysis is presented in Table 9, which also contains a similar comparison for the graded school program. For the continuous progress school, significant differences were found for only two of the eleven test scores, and in both cases the average students made greater gains than the combined group of higher and lower ability students. No differences were found for the graded school. This within-schools analysis, therefore, does not support the hypothesis that the continuous progress program increased the achievement of its exceptional children any more than it helped its students of average ability.

Finally, in order to determine if any differences in either the high ability or low ability group could be found, an analysis, shown in Table 10, was carried out in which the high, medium, and low ability groups in both schools were compared. This table contains the interaction terms for a two-factor analysis of variance, using school program as one factor and ability groups as the second factor. Only one significant difference was found, and in that case both the

Table 9

Gains in Achievement, by Students' Levels of Ability

Test	Continuous Progress School		t	p.	Graded School		t	p.
	Highest & Lowest	Medium Ability			Highest & Lowest	Medium Ability		
Durrell Listening-Reading Test								
Total Listening	6.1	9.2	3.05	<.01	11.2	8.8	1.78	NS
Total Reading	7.6	9.1	1.08	NS	10.6	8.7	1.42	NS
Differential	-0.4	1.1	0.94	NS	1.7	0.2	0.85	NS
Stanford Achievement Tests								
Word Meaning	7.8	8.5	0.65	NS	8.5	7.5	0.69	NS
Paragraph Meaning	6.0	7.8	1.64	NS	6.4	7.4	0.69	NS
Spelling	6.4	6.6	0.30	NS	10.7	9.4	0.91	NS
Word Study Skills	6.5	5.0	1.07	NS	8.6	10.3	0.98	NS
Vocabulary	6.4	8.3	0.43	NS	6.4	10.0	1.25	NS
Language	3.3	8.0	2.83	<.01	12.8	12.5	0.15	NS
Arithmetic	7.4	8.1	0.69	NS	12.1	10.8	1.32	NS
Science and Social Studies	4.6	6.2	0.99	NS	8.5	7.2	0.75	NS

Table 10

Gains in Achievement, by Students' Levels of Ability

Test	Highest Ability Students		Medium Ability Students		Lowest Ability Students		F	p.
	Continuous Progress	Graded	Continuous Progress	Graded	Continuous Progress	Graded		
Durrell Listening-Reading Test								
Total Listening	7.0	12.6	9.2	8.8	5.0	9.8	5.98	<.01
Total Reading	9.2	11.7	9.1	8.7	5.5	9.2	1.72	NS
Differential	-0.6	1.5	1.1	0.3	0.0	1.9	0.79	NS
Stanford Achievement Tests								
Word Meaning	9.8	10.7	8.5	7.5	5.7	6.7	0.68	NS
Paragraph Meaning	7.5	7.9	7.8	7.4	4.5	5.2	0.19	NS
Spelling	8.3	11.3	6.6	9.4	4.3	9.9	1.05	NS
Word Study Skills	8.8	10.6	5.0	10.3	3.6	6.8	0.92	NS
Vocabulary	13.4	15.0	8.3	10.0	-0.6	2.1	0.02	NS
Language	4.3	14.5	8.0	12.5	2.0	10.0	1.92	NS
Arithmetic	11.1	14.9	8.1	10.7	3.4	9.2	1.73	NS
Science and Social Studies	3.5	9.3	6.2	7.2	5.7	7.5	1.33	NS

highest and lowest ability students in the graded school made significantly greater gains than their continuous progress counterparts.

The overall conclusion to be drawn from these analyses is that there is no evidence in the achievement test data gathered for this study to support the claim that the students of very high or very low ability in the continuous progress program were able to improve their achievement levels more than the students of average ability. Nor did these data show that the more exceptional children in the continuous progress program gained more in achievement than their graded counterparts. As was the case with the comparisons of overall achievement, however, this conclusion must be tempered by the finding that the children in the continuous progress program who had already had experience in graded schools may have had reorientation problems which held back their achievement for a short period. Consideration should also be given to the fact that at the pretesting stage some students had not yet been placed at their correct levels.

C. Self-Concept

Student adjustment is the second area in which the effects of the continuous progress program operation might be expected to show themselves. In this area, three possible effects should be examined. The first of these arises from the suggestion that the adjustment to school of first-year students is eased by the greater flexibility of a continuous progress program. Adjustment from a relatively free nonschool situation to a comparatively more structured school situation can be expected to produce short-term difficulties in personal and social adjustment for children in this age group, difficulties which would be reflected in a decrease in self-concept during the first year in school. The hypothesis is that the flexibility of continuous progress operations may produce less of a decrease in this area.

The second area for examination comprises children's perceptions of how well they are getting along in school. The question is whether under a continuous progress program children will like school more because of fewer frustrations and will become more school-oriented, perceiving themselves as better students. The third area is found in the children's anxiety about school and school subjects: to what extent can a continuous progress program foster less anxiety because it contains fewer pressures to attain an arbitrary grade-level standard of achievement and because it does not confront the child with the possibility of a failure experience for not meeting these standards?

In order to examine these three areas of student adjustment, self-concept questionnaires were completed by the children in the graded and continuous progress schools. These questionnaires were filled out anonymously, both at the beginning of the school year and at the end of the year. Because of the difficulties inherent in measuring the self-concepts of very young children, two different questionnaires were used. The younger children, who were in their first and second years in school, were given a very simple questionnaire which required no reading ability. The older children, in their third and fourth years of school, were given more complex questionnaires in which their responses could be broken down in separate categories.*

The data gathered in this manner are presented in Table 11. Again, the scores are presented in terms of changes which occurred over the school year. The questionnaire for the younger children allows only a total score to be used. This total score reflects the child's attitude toward himself and how he gets along in a variety of situations, and can be thought of as his total concept of himself. As the figures in this table show, both groups of children suffered slight decreases in self-concept during the school year. The self-concept decrease among the continuous progress children, however, was significantly smaller than the decrease among the graded children. It may be concluded from this that the younger children in the graded school became more negative toward themselves than did the children in the continuous progress program.

The questionnaire filled out by the older children provides for attitudes-toward-self scores in six specific areas, in addition to a total self-concept score. The results of these scores are also presented in Table 11. There were no significant differences between schools on the total score and on five of the six individual scales. The only significant difference between schools was found on the general anxiety scale, where the students in the continuous progress school were found to have become slightly more anxious about things

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*These questionnaires were independently constructed specifically for use with these age groups. For a further discussion, refer to Appendix A.

Table 11

Changes in Attitudes Toward Self

	Average Change		t	p.
	Continuous Progress	Graded		
Younger Children[a]	-0.3	-1.0	2.64	<.01
Older Children[b]				
Total Self-Concept Score	-1.2	-0.5	0.81	NS
Scale 1-Behavior	-0.2	-0.2	0.57	NS
Scale 2-Intellectual & School Status	+0.3	-0.3	0.89	NS
Scale 3-Physical Appearance	+0.3	+0.6	0.61	NS
Scale 4-Anxiety[c]	-0.8	-0.5	2.55	<.05
Scale 5-Popularity	-0.5	+0.2	1.49	NS
Scale 6-Happiness & Satisfaction	-0.1	0.0	0.06	NS

[a] Children from age 6 to age 8.

[b] Children from age 8 to age 10.

[c] Greater negative change means greater anxiety.

in general during the school year. However, since these students showed a larger increase in anxiety, the possibility exists that these results were affected by the operational difficulties which the experimental school experienced in making the transition from one type of organization to the other or that the type of anxiety was one of adjustment to a new system of education.

D. Summary

Achievement and self-concept data were gathered from students in each school at the beginning and at the end of the school year. These data were analyzed in terms of changes which occurred within each school during the year. Analyses of the achievement data demonstrated that, on the whole, greater achievement gains were made in the graded school in areas involving rote memorization skills. These overall gains, however, do not tell the entire story. The differences may be a function of the difficulties inherent in making a transition from one type of school organization to another very different type of organization. The achievement differences may not be due to superior performance on the part of the graded program; rather, they may have been caused by the difficulties encountered in the continuous progress school by students who had previously attended a graded school and who therefore had to adjust their orientations to the new type of program. When the first-year students in the continuous progress school, who did not have to make this type of adjustment, were compared to their first-year counterparts in the graded school, virtually no differences in achievement were found.

Analyses were also carried out to explore the question of whether the exceptional children, the students of either very high or very low ability, in the continuous progress program made greater achievement gains than did the students of more average ability. No evidence was found that this was true.

In addition, the younger continuous progress students were found to have suffered less of a drop in self-concept than the younger graded students. The older continuous progress students, on the other hand, showed a greater increase in anxiety level than their counterparts in the graded school, a finding which strengthens the contention that the older students in the continuous progress program may have been experiencing difficulties in making the transition. It would have been interesting to explore the question of the types of anxiety experienced by the two groups of students--anxiety over achievement or anxiety over change. Unfortunately, no appropriate measuring instruments were available.

CHAPTER 9

ATTITUDES OF TEACHERS AND PARENTS

Few could argue with the contention that the merits of any educational program must be phrased in terms of its effects upon the children it is intended to serve. An evaluation would not be complete, however, if it did not give some attention to a program's impact upon those other people who also feel its effects. Two such groups of people are the teachers who are assigned to the program and the parents of children who attend the program.

The teachers occupy an important and unique position, for they see the operations of the program at the most important level. They meet the children on a daily basis. They do not see the program in the abstract, through a curtain of figures and statistics, but rather in terms of its effects upon each individual child. Each teacher, therefore, is in a position to judge a program's effects upon the small sample of children whose daily victories and tragedies he knows so well.

In addition, the teachers are in a position of subtle power. Because they are the ones who must translate the program's objectives and methods into operational activities, their influence upon the success or failure of a program is great. Teachers who believe in a program and who try their utmost to implement it can make a mediocre program look very good or can give an excellent program the success it deserves. Teachers who do not believe in a program and resist its attempts to meet objectives can affect even the best program. Teacher attitudes, therefore, must be examined before any judgement of program effectiveness is made.

The children's parents are in a very different, but no less unique, position. While they cannot see the operations of a program on as comprehensive a basis or its effects on as large a group of children, they can notice reactions of the children which are not as visible to teachers or program administrators. They see how anxious or reluctant a child is about going to school each morning, how much he talks about his school experiences. They see changes from year to year which may not be obvious to others at the school. While they cannot gain as broad a perspective as teachers or school officials, they do have a depth of concern for each child's welfare which is unmatched by those who must distribute their concern among an entire school full of children.

For these reasons, the present evaluation included attempts to measure the attitudes and opinions of both teachers and parents from the nongraded and graded school programs.

A. Teacher Attitudes

Early in the school year the teachers in both schools responded to anonymous questionnaires containing a twelve-item scale designed to measure their attitudes toward the school program in which they taught. The items in this scale were geared toward the teacher's satisfaction with his program and his judgements of its effectiveness.[*] In an attempt to determine if any changes in teacher attitudes had taken place over the school year, this questionnaire was readministered again at the end of the year.

On this scale, the attitude scores could range from zero to 84. The average score (pre- and posttests) of the teachers as a whole was 57, indicating that most of them held positive attitudes toward their own schools' programs. Comparisons between the continuous progress and graded schools showed no significant differences. At the beginning of the year the average score of the teachers in the continuous progress program was essentially the same as the score of the graded program's teachers. At the end of the year there continued to be no difference in the attitudes of the two groups of teachers.

As indicated, these attitudes were quite stable. As the figures in Table 12 show, the teachers in the graded program did not change their attitudes at all, while the teachers from the continuous progress program showed a very small increase which was not statistically significant. It can be concluded, therefore, that the overall attitudes of the two groups of teachers were identical.

When the individual items in this scale were separately examined, only a few differences were found. Early in the year the teachers in the nongraded program gave it a low rating on its "adaptability to the needs of teachers," while the graded teachers gave

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[*] A facsimile of this scale is provided in Appendix A.

Table 12

Overall Attitude Scores of Teachers

	Fall	Spring	t	p.
Continuous Progress School	54	59	1.32	NS
Graded School	57	57	0.01	NS
t	0.35	0.61		
p.	NS	NS		

their program a high rating on this item. By the end of the year, however, the nongraded teachers uprated this item and the graded teachers downrated it, so that the feelings of both groups about this situation became more nearly equal.

On the other hand, the end-of-year responses indicated that the nongraded teachers definitely rated their program higher on the degree of challenge which was provided for them, and there was a slight tendency for them to rate their program as being closer to the ideal educational program. The figures for these two responses are shown in Table 13.

In addition to the attitude scale, each teacher was given a list of fifteen possible goals of education and was asked to rank these goals in two different ways--first, in terms of how much they were stressed by the educational program in his school. In general, these rankings were quite similar across schools; both continuous

Table 13

Differences on Individual Teacher Attitude Items

Item: How challenging is the instructional program in your school for teachers? (7 possible responses)

	Fall Rating	Spring Rating	t	p.
Continuous Progress Teachers	6.6	6.9	0.84	NS
Graded Teachers	5.2	5.1	0.19	NS
t	1.56	5.59		
p.	NS	<.001		

Item: How close is this program to your conception of an ideal educational program for elementary children? (7 possible responses)

	Fall Rating	Spring Rating	t	p.
Continuous Progress Teachers	5.7	5.9	0.49	NS
Graded Teachers	5.2	4.6	1.53	NS
t	0.59	2.12		
p.	NS	<.10		

progress and graded teachers ranked the goals in approximately the same order. There were, however, a few important differences.

What do these rankings tell us about the teachers and the programs in which they taught? First, it should be noted that the rankings remained stable over the school year; the rank order of goals in the fall was essentially the same as the rank order in the spring, in both schools. Therefore, it can be concluded that the teachers were being reliable and conscientious in ranking these goals, and that they did not easily change their minds about them. Second, it was found that, within each school program, no significant differences in rank order were found between the personal importance placed upon each goal and the teacher's perception of how heavily that goal was stressed by his school program. This means that within each program the teachers' personal philosophies of education were fundamentally in agreement with the official (or operational) philosophy of the school program.

Although the overall distributions of the rank order placements did not differ between the two school programs, there were a few important differences. These can be found by an examination of Table 14, which shows the rank orders given in each school. The rankings show that the graded program's teachers tended to place more emphasis upon "knowledge of subject matter" and "language and computation skills" than did the teachers in the nongraded program. The continuous progress teachers, on the other hand, placed slightly more emphasis upon "appreciation of art, music, and literature" and "good manners and promptness." (Promptness and good manners were

Table 14

Teachers' Rankings of Educational Goals
(Mean Rankings in Parenthesis)

Continuous Progress School		Graded School	
1.	Development of Independent Thinking and Action (1.9)	1.	Development of Independent Thinking and Action (2.2)
2.	Personal Adjustment (3.0)	*2.	Language and Computation Skills (2.7)
3.	Problem Solving Skills (3.3)	3.	Personal Adjustment (3.6)
4.	Social Skills (4.5)	4.	Problem Solving Skills (4.0)
*5.	Language and Computation Skills (5.9)	5.	Social Skills and Social Concern (6.5)
6.	Respect for the Property of Others (7.3)	*6.	Knowledge of Subject Matter (7.9)
*7.	Appreciation of Art, Music, and Literature (8.1)	7.	Fundamentals in the Social and Physical Sciences (8.0)
8.	Fundamentals in the Social and Physical Sciences (8.5)	8.	Respect for the Property of Others (8.4)
9.	Appreciation for America's Institutions and Traditions (9.2)	9.	Respect for Authority (8.7)
*10.	Good Manners and Promptness (9.4)	10.	Appreciation for America's Institutions and Traditions (8.9)
11.	Physical Development and Health Skills (9.8)	11.	Physical Development and Health Skills (8.9)
12.	Respect for Authority (10.0)	*12.	Good Manners and Promptness (11.7)
*13.	Knowledge of Subject Matter (11.4)	*13.	Appreciation of Art, Music, and Literature (11.9)
14.	Understanding of Reproduction and Family Life (12.9)	14.	Understanding of Reproduction and Family Life (12.6)
15.	Competitiveness (13.2)	15.	Competitiveness (13.0)

*Statistically significant difference in average rank order placement between nongraded teachers and graded teachers, p.<.05.

very important in a program where children were constantly moving among classrooms without supervision.)

The important difference here lies in the rankings given to the goal of "knowledge of subject matter." Most nongraded programs, including the continuous progress program under examination, have tended to follow recent changes in educational philosophy which imply that the *process* of education has greater priority than the *content* of any given curriculum (see Bruner, 1963, and Postman and Weingartner, 1969). Educational theorists are placing greater emphasis upon how the child learns to think, how he learns to perceive his world, and what concepts he acquires, rather than what specific facts or skills are accumulated. Unfortunately, many graded school programs, because of their less flexible structure, have not adopted this way of thinking. In the present case, the teachers in the continuous progress school appear to be somewhat more process-oriented than the teachers in the graded school.

B. Parent Attitudes and Opinions

In a manner similar to the teachers, the parents of children in these schools also were asked to respond to anonymous questionnaires which were sent out at the beginning and the end of the school year. These questionnaires, however, were designed to assess parental attitudes and opinions toward the concepts underlying the continuous progress program, and toward the actual effects of the school programs which their children attended.

For both schools the number of parents who filled out and returned questionnaires was approximately the same in the fall and in the spring.* The proportion of parents from the continuous progress school who returned questionnaires was somewhat higher than the proportion from the graded school, which may indicate a slightly greater interest in the school program by the former. This would not be surprising, given the experimental nature of this new program and the fact that the parents of children in the continuous progress school have more education and a higher educational status.

An analysis of parents' overall attitudes toward the continuous progress program is presented in Table 15. As these figures show, the attitudes of both groups of parents tend to be positive; the overall average score of 83 was much higher than the scale's neutral point of 60. This analysis also shows that, in the fall, the small difference in attitudes toward the continuous progress idea was not significant. By the end of the year, however, an increase in the positive attitudes of the parents of children enrolled in the continuous progress program, coupled with a decrease in the positive attitudes of the graded parents, led to a situation in which the former group's attitudes toward the idea of continuous progress were significantly more positive than those of the graded children's parents.

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*Since the questionnaires were completed anonymously, there is no way of knowing if the fall and spring samples for each school were composed of the same parents. However, the classification in information which was gathered with the questionnaires indicated that the two samples for each school did not differ very much in terms of age, socioeconomic status, or background. In terms of differences between schools, the parents of children in the continuous progress program tended to have had slightly more education and more prestigious occupational status than the graded children's parents, but both groups of parents were equal in terms of age, number of school-age children, and stability in the community.

Table 15

Parental Attitudes Toward the Idea
of Continuous Progress

	Fall Mean Score[a]	Spring Mean Score	t	p.
Continuous Progress Parents	83	86	0.66	NS
Graded Parents	80	76	0.56	NS
t	0.85	2.03		
p.	NS	<.05		

[a] Scores can range from 0 to 120.

This result was confirmed by a series of ten questions which asked for opinions concerning the various aspects of a continuous progress program. Looking only at the spring questionnaires, the continuous progress parents had higher opinions than the graded parents on six of the ten questions, with no differences being found on the other four. Thus, the continuous progress parents were more favorably disposed toward the idea of developmental levels replacing age-based grades, of flexible level changes replacing yearly pass or fail, and of having children change levels for different subjects;

they were more confident that elementary students would have little difficulty in adapting to a continuous progress program or in returning to a graded system; and they felt that children in the continuous progress program would probably like school more. There were no differences between the two groups of parents, however, in terms of whether children would learn more in a continuous progress program and get a better education in such a program. *In both groups, the majority of parents felt that children would learn more and get a better education in a continuous progress program, and would like school more in this type of program.*

An analysis of the parents' overall attitudes toward the school attended by their children showed no changes over the school year and no significant differences between the parents from the two schools, as seen in Table 16. A separate analysis of six opinion questions concerning different aspects of their children's schools revealed that more than three-fourths of the parents in both schools thought that their schools were introducing change at a proper rate of speed (neither too fast nor too slowly), and that at the end of the year more graded parents (83%) than continuous progress parents (69%) thought that their children were receiving a "good or very good education." This difference may reflect the fact that the parents of children at the continuous progress school had more education and were in more prestigious occupations, tending to be more critical. However, more continuous progress parents thought that their children were learning more and liked school more than other children.

Table 16

Parental Attitudes Toward Their Children's School

	Fall Mean Score[a]	Spring Mean Score	t	p.
Continuous Progress Parents	85	82	1.01	NS
Graded Parents	86	88	0.44	NS
t	1.13	1.65		
p.	NS	NS		

[a] Scores can range from 0 to 120.

C. Summary

Data which were gathered from the teachers in both schools indicated that overall attitudes toward each school's programs were positive and that no significant differences in overall attitudes existed between the two schools. An analysis of individual attitude items indicated that the teachers in the continuous progress school rated their program as more challenging to teachers and closer to their conceptions of an ideal educational program than did the teachers in the graded school.

The teachers in both schools indicated that the policies of the program in which they taught were very close in concept to their own personal philosophies of education. Teachers in the continuous progress program showed a tendency to be oriented more toward educational process than toward curriculum content, an orientation which is in agreement with the basic tenets of a continuous progress program. The teachers from the graded program were slightly more oriented toward curriculum content, which is more in line with the graded philosophy.

Data collected from the parents of children in these schools indicated that the parents of children in the continuous progress school were more favorable toward the idea of continuous progress and that more of these parents thought their children were leaning more and enjoyed school more. However, there were no differences between parent groups on overall attitudes toward their children's school. Both groups of parents were in agreement that children would probably learn more, would like school better, and would receive a better education in a continuous progress program.

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CHAPTER 10

THE NECESSARY CONDITIONS FOR INNOVATION IN THE PUBLIC SCHOOLS

On balance, it can be concluded that the continuous progress program is one of the ways in which a school system can meet the goals of a quality education, as prescribed by the Pennsylvania Department of Education. To institute such a program requires all of the elements which have been fully described. There is no do-it-yourself kit that can be provided. It seems desirable, therefore, by way of concluding comments, to set forth clearly the necessary conditions for such an innovation. These include leadership, teacher quality, professional interchange, planning and evaluation, adequate time, sufficient resources (or the reallocation of existing resources), and parental and community support. Each of these will be discussed briefly.

A. Qualities of Leadership

1. A Strong and Inspired Leadership

One of the most vital aspects of any experimental program is a strong and inspired leadership--a leadership which cares deeply about the program, which is highly inspired to work to the utmost to make it succeed, and which has the strength and determination to overcome the obstacles it encounters. An uninspired leadership can never hope to bring about innovation. In such a situation an innovative program can quickly revert back to older patterns and forms. The tension of developing a new program, the challenge for teachers to behave and adjust in new ways are such that it is impossible to succeed without strong leadership to insist that the staff follow certain guidelines which are fundamental to the program and without which the program would be a mere shadow of its potential.

2. Expert Leadership

Strong and inspired leadership are not in themselves sufficient conditions for successful innovation. The leadership must also be "expert": it must be expert in the fields of education and child development to be able to determine what kinds of innovation are required, and to implement successfully these innovations. Leadership can be and, in certain cases in public education, has been strong and inspired but lacking in expertise. When this is the case faulty programs may be developed, programs which on occasion may be the antithesis of what education should be. It is advisable to pool the resources of several experts in order to develop the optimal program.

3. Supportive Noninterference of the School District

Two qualities are essential to the "supportive noninterference" of the school district. Once competent leadership has been chosen to develop a program, the school district has fulfilled its primary responsibility and should take a position of total cooperation, combined with a "laissez faire" approach. In other words, the school district should entrust the entire program of the school to the leadership, and cooperate as much as possible without interfering with the development of a program. If the school district has fulfilled its role of choosing the leadership adequately, there should be no need for the district to assume the role of policeman; rather, it should step aside and permit the program leadership to develop the project. At the same time, positive teaching is required. (The need for constant re-evaluation by the staff, and hopefully by outside sources not connected with the district, will be discussed below. Through this means the school district can determine the elements of successes or failures of the program and make an independent judgement.)

B. Qualities of Staff

1. Competence and Staff Differentiation

Any innovation in the public schools cannot succeed without a competent staff. During the course of the experiment evaluated in this report, it was found that most below average teachers were not able to grow and develop sufficiently to implement the program successfully, while most average and better teachers benefited noticeably from the program. It is imperative that the teachers be of as high a quality as possible and that methods be developed by which teachers who lack the necessary characteristics for teaching or who do not have the ability to adjust to innovative programs may be weeded out of the public schools.

One problem which hindered the continuous progress program was the fact that teachers could not be sorted out according to competence and given differential responsibilities on this basis. Thus the most highly skilled teacher and the poorest teacher had essentially the same responsibilities and potential to influence the program. This fostered a vacuum of leadership among the teaching staff, and into this situation informal leadership of varying competency emerged who greatly influenced the other teachers. Some form of differentiated staffing such as those suggested by Dwight Allen (1968) and Martin Essex (1967) would place the most competent teachers in positions of leadership as master teachers and the least competent teachers in the lower responsibility levels. This would doubtlessly make the emergence of informal leaders less likely and contribute greatly to the success of the program.

C. Intensive and Continuous Teacher Education and Professional Interchange

In order to succeed, any innovative program requires the inclusion of a continuous progress program of in-service teacher education. Such teacher education must be a permanent, planned, and routinely utilized part of the program. In the experimental school this intensive teacher education took place at weekly meetings, and occurred daily in the individual classrooms as the specialists consulted with the teachers on developing their teaching techniques and the experimental program as a whole. Only this kind of intensive educational effort can combat the problems inherent in the tendency toward a self-contained classroom situation. Those with more expertise must be in a position of constantly sharing it. The professional interchange provides an excellent opportunity for teachers to grow and develop, with less able and less experienced teachers learning from those who are more able and more experienced. This kind of climate enables teachers to develop a strong professional esprit des corps, as occurred among the teachers at the experimental school. Given proper program leadership this kind of group supportiveness can be very beneficial to a program.

D. Planning and Evaluation

1. Continuous Planning and Evaluation

Continuous planning must be built into any innovative program. Any one-shot planning situation which does not allow for re-evaluation and continuous improvement will lead to stagnation and failure. Planning must be built into the structure of the program as it was in the experimental school's weekly planning sessions (which also served as a vehicle for teacher education), teacher in-service training, and informal teacher meetings. Any innovative program must exist in a fluid situation. In fact, to become stagnant in education is to fail since children are not stagnant, but constantly growing. Thus, given the implicit fluidity of any truly excellent educational program, planning must be a constant part of the process of program development. Continuous planning requires constant evaluation of the program--its strengths and weaknesses and means of implementing improvements.

2. Articulated Goals/Criteria

Articulated goals are the vital foundation on which any innovative program must be built and judged; otherwise any innovation is simply a stab in the dark. The experimental school, through its expert leadership, developed a well-articulated set of goals which it was able to utilize to build the continuous progress program. From these goals the staff was able to develop criteria for re-evaluating the program and its relevance to children. The importance of criteria for determining the relevance of the program to children cannot be overstressed; by building levels which attempted to approximate the growth process of the children, and by observing children's growth processes in relation to these levels, this relevance was achieved at the experimental school.

3. Objective Evaluation

Before one can develop a truly unbiased and rigorous picture of the successes and failures of an experimental program it is important to conduct an objective study, recognizing the difficulty for the program staff or the school district to be sufficiently objective about its own program. Ideally, the evaluation should be of longer duration than the present study, and should probably include an evaluation during the first, third, and tenth years of operation. If such a lengthy evaluation is impractical, a one-year evaluation after the first two years of the program would be sufficient. During the first and second years of any new program it is very difficult to determine its impact on the children.

4. Means of Implementing Improvements

A means of implementing improvements in the program must be developed. Essentially this means that the program must be fluid enough that the staff is not locked into certain alternatives for reaching the program goals if they should prove to be unfruitful. This requires not only fluidity, but the willingness of leadership and staff to make changes when it is evident that some aspect of the project is not meeting the needs and goals of the program.

E. Sufficient Time to Mature

It is impossible to determine the success or failure of an innovative program where it has been in operation for only one year, or even two. To give any program an opportunity to develop, to iron out the inevitable problems which arise with changes in a school, and to discount the success of the program which may simply be due to the fact that the staff is working in an experiment, it is essential to permit the program to operate for at least three and probably five years before it can be fairly evaluated. This requires a willingness on the part of the school district to give the program supportive noninterference for three to five years before reaching a final decision as to its worth. Though some may argue that this is an extraordinary amount of time to go out on a limb with a new experiment, given the static nature of education in general, and the well-publicized failures of many innovations because of improper implementation and premature judgement, such patience would appear to be warranted.

F. Resources

1. Sufficient Personnel

It should be obvious that any educational program requires sufficient staff to develop properly--teachers, leadership, and expertise. Any innovation requires the inspiration and drive of a sufficient number of expert leaders. Overworked staff (as in the case of the mathematics specialist at the experimental school observed) cannot possibly do justice to any experimental program. Without adequate personnel, no innovation can succeed. Teacher aides would have been a great help to teachers in the continuous progress program if they could have been trained and utilized properly.

2. Sufficient Finances for Instructional Materials

An innovative program obviously requires a budget adequate enough to allow for purchase of the instructional materials essential to implementing the program. This does not mean that elaborate and expensive teaching devices and machines are necessary. Quite the contrary, such devices, in terms of educative value, may be counterproductive and a waste of money. A sufficient budget, or access to a wealth of language arts and computational skills materials, is required. At the experimental school there was a budget, and access to the pool of library resources of the entire district. The quality rather than quantity of materials is crucial, although there must be sufficient materials to serve all the children in the school. A modest but qualitatively superior pool of instructional materials is infinitely more desirable than a large but inferior collection. The experimental staff seemed to have a real understanding of the value and utilization of excellent resource materials. Money is required to obtain these. This does not necessarily mean increases in the budget but a reallocation of certain budget items. To tell a teacher to innovate without handing him worthwhile materials to utilize ties his hands considerably.

G. Parental and Community Support

Any innovative program in a school system is confronted with a series of problems in connection with parental and community support. First, parents are vitally concerned--as they should be--about the education of their children while the professional educator must be concerned with the education of the entire student body. Parents are frequently victims of certain outmoded educational theories, reflecting their own educational experiences (highly individualized), their socioeconomic backgrounds, and the general community attitudes. It is essential that parents be informed--in advanced--of forthcoming educational innovations and that the school maintain continuous communication with them, particularly in the early stages of the innovation when children report back to their parents their versions of what is taking place. This is particularly serious during the early stages of the experiment when all groups involved--leadership, staff, and children--may be, or appear to be, vague or ambiguous about the program.

In meeting this problem consideration should be given to the social and economic backgrounds of the parents, the variations in which can call forth different responses on their part.

APPENDIX A

THE EVALUATION PROCEDURES AND INSTRUMENTS

This evaluation consisted of a comparison of two school programs. Each was housed in a separate school building, and both were located within the same school district. The comparison contained three major components: a testing program which included measures of intelligence, achievement, and adjustment; a procedure for observing the process of education and the classroom atmosphere within each of the schools; and a comparison of the costs involved in operating each type of school program.

The Experimental and Control Schools

The continuous progress program in the experimental school was a new operation for the 1969-70 school year. Planning for the introduction of this program had been carried out during the previous year. The evaluation and the new program both began at the same time, a situation which contains certain advantages and disadvantages. On the advantageous side, it allowed the evaluation team to gain some insights into the process of making a new program operational, and it provided evaluative information to the new program at the time when this program most needed such information--after its first year of operation. On the disadvantageous side, this situation meant that the comparison between schools would suffer because the nongraded program, due to the inevitable problems associated with converting an entire school building to a new kind of operation, would most probably not be performing anywhere near its optimal level. This meant that the evaluation could not really be considered a true test of the effects of continuous progress in the school district.

The control school was chosen as the elementary school within the district which most closely matched the experimental school in terms of size and socioeconomic characteristics of the student body, number and characteristics of teachers, and previous levels of academic achievement among the students. In the judgement of the school district's central office staff, the control school was a good example of the kind of graded school program which was found in the district and which probably exists in other school districts.

There were, however, two major differences between these schools, one of which could be corrected for the purposes of the evaluation and one which could not. The first difficulty was that the student body of the continuous progress school consisted of children ranging from grade one through the fourth year of schooling (there was a kindergarten but it did not participate in the program), while the control school ranged from kindergarten through sixth grade. This problem was handled by restricting the evaluation in the control school to the first through fourth grades. Observations took place only in grades 1-4, tests were administered only in grades 1-4, and cost estimates were prorated on the basis of 1-4. The second difficulty was that the principal in the control school was dividing his time between two different school buildings, so that the control school in effect had only one-half of the supervision found in the experimental school. This difficulty could be solved when making cost estimates, but it was not possible to estimate its effects upon other variables; it remained an unknown which may or may not have affected the results of the evaluation.

Observation Procedures

One observer with a background in psychology and education, who is also trained in observation and interviewing techniques, visited both schools during the three observation periods in October/November, January/February, and April/May. A total of eleven school days were spent at the control school, and nineteen were spent at the experimental school. (The experimental school was almost double the size of the control school, and its program, being more complex, required more observation time.)

The observer utilized the particpant-observer technique, attempting to become a part of the classroom situation by assisting the teacher and helping individual children during work periods as well as observing the general situation in the classroom. He also discussed various aspects of the program with the teachers and leadership individually, and in casual group situations in the lunchrooms and halls. Because of structural differences in the two schools, it soon became evident that different techniques of observation were appropriate to each. At the control school, with its self-contained classroom situation, the observer attempted to stay in one room for a block of time to observe what occurred during this time. In the course of this stay he would talk with various children about aspects of school when it was appropriate and did not disrupt the class or the teacher.

At the experimental school the observer quickly discovered that staying with one teacher gave him no sense of what was happening to the children during the day; thus he decided to spend each day with a different child, going with him to his various classes and talking with him and his classmates about the school when the opportunity arose. (The observer made a point of spending the day with children representing all levels of ability.) At appropriate times, in order to develop further perspective, the observer stayed in one class for a block of time rather than following children. This combined method proved to be far more satisfactory at the experimental school, but of little value at the control school since the children's experiences were not as varied during the day.

The observer did move to ability groupings with certain control school children to get a feel for this transition, but spending the whole day with one child proved to be less fruitful than other approaches. He also had lunch with the teachers and spoke with some of them after school as well as during free periods. He attended a number of the regular weekly planning sessions of teachers at the experimental school and one in-service day at the control school. (There was one in-service day during the year plus a number of meetings at the end of the year to discuss a new program that would be utilized the following year. Since this did not seem germane to the program under study, the observer attended only one of these meetings.)

The Testing Program

Intelligence, achievement, and self-concept tests were administered in each school during the first month and the last month of the school year. The tests were taken by all children who were in their first four years of school. Since the major interest of the evaluation was a comparison between programs, the total population of first- through fourth-year students in each school was tested; there was no attempt to follow two matched groups over the course of the year.

The tests which were used were:

1. *Science Research Associates Test of Primary Mental Abilities, Forms K-1 and 2-4.* The group intelligence test originally designed by L. L. Thurstone, it is designed to provide both multi-factored and general measures of intelligence. In this study, only the general intelligence factor was used.

2. *The Stanford Achievement Tests (SAT), batteries Primary I, Primary II, Intermediate I.* This is a series of comprehensive achievement tests developed to measure the important knowledge, skills, and understandings commonly accepted as desirable outcomes of the major branches of the elementary curriculum. The tests are intended to provide dependable measures of these outcomes which are comparable from subject to subject and grade to grade. The Primary I battery provides achievement scores in six areas; the Primary II battery provides scores

in eight areas; the Intermediate I battery provides scores in ten areas.

3. The Durrell Listening-Reading Series, Forms Primary and Intermediate. This test is limited to the area of reading achievement. Recently designed, it provides measures of the child's listening and reading capabilities, and points out discrepancies between the two. If a child's reading score is less than his listening score, he is considered to be reading at a level which is below his potential performance level.

4. The Illinois Index of Self-Derogation. This is a self-concept test designed by Meyerowitz (1962) for use with children who are in their first or second year of school. As far as the evaluators in the present study could determine, it is the only self-concept test which can reliably be used with children this young. It requires no reading ability. For each of the thirty items, the child is asked to choose which of two alternate statements best describes him. In each item, one of the alternatives is a socially desirable description and the other is less desirable. Only one score is available, a score which reflects the child's perception of himself within his total environment.

5. The Piers-Harris Children's Self-Concept Scale. This is a self-concept test developed for use with children who are beyond the second year of schooling. It is a self-report inventory containing eighty yes-no descriptive statements, normally requiring approximately fifteen minutes to administer. In addition to the total score, six factor scores are available.

This battery of tests required approximately six hours to complete. In the fall, the tests were scheduled over a two-week period; in the spring they were spread out over three weeks. In both schools, the tests were administered in the classroom by the children's regular teachers, always being given as the first activity of the day. Teacher training sessions were held before the testing was begun, and proctors were available at the option of the teacher. Most of the teachers requested the services of one proctor.

Analysis of the Test Data

Due to the operational difficulties which it would have created for the schools involved, no attempt was made to obtain make-up scores for children who were absent on the days the tests were given. Although this may have led to a selectivity bias in the data, it was reasoned that this bias would balance out across the two schools. In order to retain a constant student population within each school, avoiding problems of in- and out-migrations among students, a child was not counted as part of the study population unless he had completed at least one test in the fall and one in the spring.

Preliminary analysis indicated that no difference in the intelligence of children existed between the schools. The mean pretest IQ in both schools was 107.9; a posttest mean IQ of 112.8 was found in the nongraded school, and 113.8 in the graded school. Neither pre-post nor between-schools comparisons were significant. It was decided, therefore, that no need existed to control the achievement test scores for individual variations in intelligence. As discussed in Chapter 7, however, a series of analyses of achievement scores broken out by IQ level was carried out for purposes other than that of statistical control.

As previously explained, all achievement test data were reported in terms of "achievement gain" scores, which were simply calculated by subtracting each child's pretest score from his posttest score. These gain scores were used for three reasons. First, the purpose of the evaluation was to compare the effects of each program over a school year, so that initial or final achievement levels per se were not considered relevant for these purposes. Second, pretest achievement levels were found to be significantly different between schools on five of the eleven tested areas, and in all five of these significant comparisons the nongraded students were superior. These initial imbalances could have been corrected by using a pre-post covariance analysis, but the use of gain scores seemed to be a better approach, given the purposes of the study. Finally, it has been pointed out that the single most difficult task facing a new nongraded educational program is trying to have everyone involved unlearn the concept of "grade." Since achievement test scores are reported in terms of grade-placement levels, the evaluators felt that reporting such scores would only lead to invidious comparisons of the two schools in terms of average grade placement achievement, a development which would have adversely affected administration of the nongraded program.

For this last reason, it was decided to convert the grade-placement scores into different units in order to avoid the problems associated with comparisons of grade-placement gains. This conversion was a simple arithmetic one which in no way affected the distributions of test scores.

As mentioned previously, the three different batteries in the SAT which were used had different numbers of subtests. The Primary I battery incorporated six subtests; the Primary II battery incorporated eight subtests; the Intermediate I battery incorporated ten subtests. Unfortunately, these tests are normed such that, in a pre-post study, children of certain ages must take a battery in the spring which is more advanced than the battery taken in the fall; a different battery means slightly different subtests in the areas of arithmetic and science and social studies. For example, a child taking the Primary I battery in the fall would receive only one overall arithmetic score; if he takes Primary II in the spring he receives two arithmetic scores: concepts and computation. To avoid this problem of commensurability, scores on the arithmetic concepts and arithmetic computation subtests were averaged, making the resultant mean score directly comparable to a student's pretest arithmetic score. A similar procedure was followed in all such cases.

Parents' and Teachers' Questionnaires

Parents' questionnaires were sent out by the school district offices and returned to these offices in special envelopes. The distribution dates were October 8 and May 29. Returns by the parents were both voluntary and anonymous, although standard classification information was requested in order to ascertain the comparability of pre-post and between-school samples. Since parents with more than one elementary school child would have received (and thereby could have returned) more than one questionnaire, exact return rates could not be calculated. Assuming that the bias in this case was balanced across the schools, returns as a percentage of the student body were very slightly higher among nongraded parents.

Teacher questionnaires were distributed in December and again in May. Every effort was made to get a complete return for each teacher, but a few teachers did not comply. These questionnaires were also anonymous, identified only by school building and, in the nongraded school, by division.

Samples of the parents' and teachers' questionnaires follow this appendix.

PARENTS' QUESTIONNAIRE

I. In this section of the questionnaire we are interested in how parents feel about the ideas behind a Continuous Progress Program for elementary schools. The following questions refer to Continuous Progress Programs in general, not to any specific school.

1. Many new ideas are being introduced into schools these days. Do you feel that the schools are changing too rapidly, or not rapidly enough?
____The schools are changing too rapidly.
____The schools are changing at a proper speed.
____The schools are not changing rapidly enough.

2. The basic idea behind a Continuous Progress Program is that children are assigned to different educational levels depending upon their educational and developmental needs, rather than being assigned to grades (first grade, second grade, etc.) on the basis of age. Do you think that this is a good idea?
____I think it is a very good idea.
____I think it a good idea.
____I am undecided.
____I think it is a poor idea.
____I think it is a very poor idea.

3. In a Continuous Progress Program children may move from one level to another whenever they are ready, rather than passing or failing at the end of a school year. Do you think this is a good idea?
____I think it is a very good idea.
____I think it is a good idea.
____I am undecided.
____I think it is a poor idea.
____I think it is a very poor idea.

4. In a Continuous Progress Program children may be assigned to different levels for different subjects (for example, one level for language arts and a different level for mathematics) instead of being in the same grade for all subjects. Do you think that this is a good idea?
____I think it is a very good idea.
____I think it is a good idea.
____I am undecided.
____I think it is a poor idea.
____I think it is a very poor idea.

5. In a Continuous Progress Program children may sometimes be asked to work by themselves. Do you feel that children in elementary school are old enough for individual work?
____All elementary school children are old enough.
____Most elementary school children are old enough.
____Some elementary school children are old enough.
____Few elementary school children are old enough.
____No elementary school children are old enough.

At what age do you think that children are old enough for individual work?
____years old.

6. Do you think that most children would be able to learn more in a Continuous Progress Program or in a regular (graded) school program?
____Children would learn more in a Continuous Progress Program.
____Children would learn more in a regular school program.
____The type of program would not make much difference in how much the children learn.

7. Do you think that children in a Continuous Progress Program would like school any more than children in a regular school program?
____Children in a Continuous Progress Program would like school more.
____Children in a regular school program would like school more.
____The type of program should not make much difference in how much children like school.

8. Do you think that children would get a better education in a regular school program or in a Continuous Progress Program?
____Children would get a better education in a regular school program.
____Children would get a better education in a Continuous Progress Program.
____It should not make much difference.

9a. Do you think that it would be difficult for children who have been attending a regular school program to change to a Continuous Progress Program?
____It would be difficult for almost all children.
____It would be difficult for most children.
____It would be difficult for about half of the children.
____It would be difficult for a few children.
____It would be difficult for almost none of the children.

9b. Do you think it would be difficult for children who have been attending a Continuous Progress Program to change to a regular school program?
____It would be difficult for almost all children.
____It would be difficult for most children.
____It would be difficult for about half of the children.
____It would be difficult for a few children.
____It would be difficult for almost none of the children.

II. In this section of the questionnaire we are interested in how parents feel about the education their children are receiving at the present time.

10. Do you feel that the school your child attends is attempting to introduce changes too rapidly, not rapidly enough, or at a proper rate?
____Too rapidly.
____Not rapidly enough.
____At a proper rate.

11. Do you feel that your child is getting a good education in this school?
____I feel that my child is getting a very good education.
____I feel that my child is getting a good education.
____I am not sure whether my child's education has been good or bad.
____I feel that my child is getting a poor education.
____I feel that my child is getting a very poor education.

12. Do you feel that your child is learning as much as others his own age?
____He is learning more than others his own age.
____He is learning as much as others his own age.
____He is learning less than others his own age.

13. Do you feel that your child likes school as much as others his own age?
____He likes school more than others his own age.
____He likes school as much as others his own age.
____He likes school less than others his own age.

14. Do you feel that your child is developing initiative and responsibility for his own education as rapidly as others his own age?
____He is developing initiative and responsibility more rapidly than others his own age.
____He is developing initiative and responsibility as rapidly as others his own age.
____He is developing initiative and responsibility less rapidly than others his own age.

15. Many people think that a school should keep parents informed about the school's educational plans. How do you feel your child's school compares with most other schools with regard to keeping parents informed?
____My child's school is better than most other schools.
____My child's school is about the same as most other schools.
____My child's school is not as good as most other schools.

16. It is also thought that a school should attempt to involve parents in the educational process and in the school's activities. During the past school year, how many times did you or your spouse become involved in activities at your child's school?
____times.

In what types of school activities did you or your spouse become involved? [Check as many as necessary.]
____Parent-teacher conferences.
____P.T.A. or other school-related meetings.
____Attendance of open house.
____Attendance of children's performances or picnics.
____Field trip aide.
____Clerical aide.
____Instructional resource aide.
____Other: ______________________________

III. Overall attitude toward the Continuous Progress idea.

To reflect your overall attitude, suppose that the line below represents a range of all possible attitudes toward this idea. The right end of the line indicates complete approval of this idea; the left end indicates complete disapproval. To show your own attitude, make an "X" at the place on the line that best indicates where your feelings about Continuous Progress lie.

Complete____Complete
Disapproval Approval

IV. Overall attitude toward your child's elementary school.

To show your own attitude, make an "X" at the place on the line that best indicates where your feelings about your child's school lie.

Complete____Complete
Disapproval Approval

V. Classification information.

Since this questionnaire is to be anonymous, we would like some simple information about the persons who complete it.

Age: ____ Sex: ____ Number of school-age children: ____

Occupation: ____________ Spouse's occupation: ______________

Previous education:
____less than high school diploma.
____high school diploma.
____more than high school diploma.

How long have you lived in State College? ___________________

Which elementary school does your child attend?
_____________________School.
_____________________School.

Did your child(ren) attend this school last year? ____Yes
____No

Have you received any information concerning the Continuous Progress Plan?
____Yes:
How was this information received?
____In a parents' meeting at the school.
____In a discussion with a school official, principal, or teacher.
____In a letter from the school.
____In the newspaper.
____In a discussion with friends.
____Other: ___________________________
____No

TEACHERS' QUESTIONNAIRE

RATING SCALES FOR TEACHERS AND ADMINISTRATORS

The judgements of teachers and administrators are an important part of the comparison of graded and nongraded educational programs. The following rating scales are designed to help you to evaluate the educational program in your school.

We are making every effort to make your judgements anonymous and strictly confidential. Please cooperate with us by leaving this form unsigned and by avoiding discussing it with other teachers. Simply fill it out and return it in the accompanying addressed envelope to the Institute for Research on Human Resources.

A. Rank the seven items on this list which are the most important goals in the education of elementary students with numbers A (A is most important) through G. Rank the seven items on this list which are the least important goals in the education of elementary students with numbers 1 through 7 (7 is least important).

__________ Language and computation skills

__________ Appreciation for America's institutions and traditions

__________ Physical development and health skills

__________ Social skills and social concern

__________ Understanding of reproduction and family life

__________ Competitiveness

__________ Good manners and promptness

__________ Problem solving skills

__________ Knowledge of subject matter

__________ Personal adjustment

__________ Respect for the property of others

__________ Development of independent thinking and action

__________ Respect for authority

__________ Appreciation of art, music, and literature

__________ Fundamentals in the social and physical sciences

B. Rank the seven items on this list which are most heavily stressed by the instructional program in the school where you teach with A (A is most stressed) through G. Rank the seven items on this list which are least heavily stressed in the instructional program in the school where you teach with the numbers 1 to 7 (7 is least stressed).

__________ Language and computation skills

__________ Appreciation for America's institutions and traditions

__________ Physical development and health skills

__________ Social skills and social concern

__________ Understanding of reproduction and family life

__________ Competitiveness

__________ Good manners and promptness

__________ Problem solving skills

__________ Knowledge of subject matter

__________ Personal adjustment

__________ Respect for the property of others

__________ Development of independent thinking and action

__________ Respect for authority

__________ Appreciation of art, music, and literature

__________ Fundamentals in the social and physical sciences

C. Each of these bi-polar rating scales represents a continuous range of values from one extreme to its opposite, with the center of the line representing a middle ground between the two extremes. Please place an "X" at the point along the continuum that you feel best describes the situation in your class, with your students.

1. Are you satisfied with your role in the instructional program in your school?

Very unsatisfied |____|____|____|____|____|____|____| Very satisfied

2. How do the teachers feel about the teaching situation in your school?

Very satisfied |____|____|____|____|____|____|____| Very unsatisfied

3. How much does the program demand of the teachers?

Too much |____|____|____|____|____|____|____| Too little

4. How adaptable is the program to the needs of the children?

Very adaptable |____|____|____|____|____|____|____| Not at all adaptable

5. How adaptable is the program to the needs of the teachers?

Very adaptable |____|____|____|____|____|____|____| Not at all adaptable

6. How effective are the tools you are given for evaluating pupil progress?

Very ineffective |____|____|____|____|____|____|____| Very effective

7. How restricted do you feel by the instructional program in your school?

Very restricted |____|____|____|____|____|____|____| Very unrestricted

8. How challenging is the instructional program in your school for teachers?

Very challenging |____|____|____|____|____|____|____| Not at all challenging

9. How well has this instructional program succeeded in meeting its goals?

Total failure |___|___|___|___|___|___|___| Complete success

10. How close does this instructional program come to providing the best possible education for your children?

Very close |___|___|___|___|___|___|___| Very remote

11. How close is this program to your conception of an ideal educational program for elementary children?

Very remote |___|___|___|___|___|___|___| Very close

12. Do you prefer to teach in a graded or a nongraded school?

Graded _____ Nongraded _____

13. How would you feel about participating in the same instructional program next year?

Very happy |___|___|___|___|___|___|___| Very unhappy

APPENDIX B

COMPARATIVE COSTS OF A GRADED PROGRAM AND A CONTINUOUS PROGRESS PROGRAM

In the establishment of a continuous progress program a basic question raised is the cost, or, more specifically, the extra cost of such a program. Two possible approaches were possible: One was to compare the hypothetical costs of the continuous progress school if it had remained on a graded basis with the actual costs incurred by the change to continuous progress. The other was to compare the costs of operations of the experimental school with those of the control school. Because of variations in teachers' salaries, principal responsibility, size of school (both in enrollment and in number of classes), etc., it would appear to be preferable to utilize the first approach.

The following costs were considered fixed, regardless of type of program:

a. Principal salary

b. Secretarial, clerical, and custodial salaries

c. Custodial and maintenance supplies

Other costs which were presumably higher because of the continuous progress program included:

a. The cost of the time of reading consultants. However, the actual costs of this time should be adjusted and reduced, when it is recognized that the extra costs result from starting the program, It can be assumed that over time these costs can be reduced. In addition, if one assumes that these are already fixed costs to the school district, they can be considered as zero costs to the school.

b. The costs of instructional materials and supplies. Here, too, they may be "starting-up" costs. These extra costs might be offset, over time, by reduced expenditures for textbooks and workbooks.

c. The costs of field trips.

When all of these adjustments were made it was concluded that the per pupil cost for a continuous progress program was only slightly (possibly 2 to 3 percent) higher than for a graded approach, if that much. It is suggested, further, that with the development of a differentiated staffing pattern, instructional costs can be reduced. Since these represent about 80 percent of total costs, the opportunity exists to conduct a continuous progress program at a lower cost than that of a graded program.

A Comparison of the Costs of a Hypothetical Graded School and an Actual Nongraded School

	Hypothetical* Graded	Actual Nongraded
Teacher Salaries	$170,003.00[1]	$170,003.00
Administrative Salaries	15,876.08	17,055.00
Principal	11,216.00[1]	11,216.00
Consultants	4,660.08[2]	5,839.00[2]
Secretarial, Clerical, and Custodial Salaries	15,662.50[1]	15,662.50
Instructional Materials and Supplies	10,098.00[3]	14,096.46
Custodial and Maintenance Supplies	2,113.23[1]	2,113.23
Field Trips	24.00[4]	223.00
Volunteered Community Resources	3,942.01[5]	7,440.01
Total Costs	$217,718.82	$226,593.20
Number of Pupils	452	452
Per-Pupil Cost	$418.68	$501.31
Actual Costs of the School District[6]	$213,776.81	$219,153.19
Per-Pupil Costs	$472.96	$484.85

[1] These factors are not considered to be a function of nongradedness, and are therefore taken directly from the 1969-70 costs of the nongraded school.

[2] Consultants' salary estimates based upon their own estimates of the time they would put into a graded program in this building and into a smoothly functioning nongraded program.

[3] Actual cost figures for the school building in 1968-69 were used where they were available; where not available 1969-70 costs were used for those categories.

[4] No cost data available for 1968-69; therefore, based on discussions with principal and cost accountant, figures were taken from the graded school's 1969-70 budget.

[5] Includes all volunteered resources used by actual graded school except outdoor education program.

[6] Does not include Volunteered Community Resources.

[*] Hypothetical in the sense that some of the costs are estimated on the assumption that there is no reason why the costs would be different because of gradedness.

Nongraded School Start-up Costs

	Real Cost	Actual Cost to the District
Salaries[1]	$ 3,111.20	$3,111.20
Consultants' Time	20,257.00[2]	2,490.48[3]
Building Modifications	144.98	144.98
Public Relations	65.00	65.00
Total Start-up Costs	23,578.18	5,811.66
Number of Pupils	452	452
Per-Pupil Start-up Cost	$52.16	$12.86

[1] Includes principal's summer salary plus extended contract work done by teachers.

[2] Includes summer work previous to start of program, plus consultants' estimates of the percentage of their time devoted to program start-up time during the school year.

[3] Since the district hired no additional consultants, the regular staff put in much more time at the nongraded school in 1969-70 and correspondingly less time in other school buildings. Therefore, this was a real cost of the nongraded program, but was not a cost incurred by the school district.

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